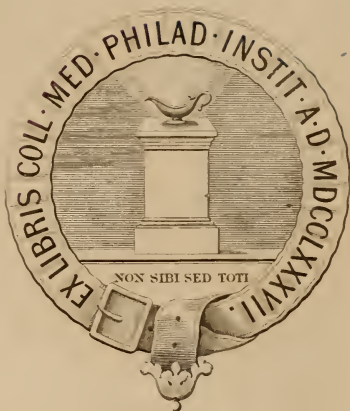


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No. 1.

PART FIRST.

ORIGINAL COMMUNICATIONS.

An interesting case of Disease of the Nervous System. By
LEMAN GALPIN, M. D., Milan, Ohio.

It has been thought that the publication of the following narrative, descriptive of symptoms and incidents that occurred in connection with my recent sickness, might not prove unacceptable to the profession ; and especially, as some of the features of the case were so distinctive as to appear to be *unique*, if not "*suigeneris*."

Yielding, therefore, to the repeated solicitations of medical, as well as non-medical friends, I now proceed, in fulfillment of my promise, to chronicle the facts connected therewith, so far as memory serves me.

Aetat 43, nervo-bilious temperament, height 5 feet 4 inches, general weight 163, have been practicing medicine nearly 20 years.

Have never been subject to neuralgia, but for the last eight or ten years have had chronic rheumatism in the right shoulder joint.

Quite late in October, 1857, I was taken with what, in common parlance, is called "stitch in the back," a form of disease to which I had been subject once or twice every season for the last five or six years, usually continuing for three or four days. Not having been in the habit of paying special attention to myself for slight ailments, I pursued my usual neglectful course in this instance. On the third day after the disease thus manifested itself, it was transferred from the sacro-lumbar region to the gluteal muscles of the right side, at first with occasional spasmodic pains, but gradually increas-

ing in frequency and intensity. It continued thus till about the close of November, at which time the greatest amount of pain seemed to be concentrated about and in the hip joint. The spasticity of this joint was so violent at times that it did seem as if the *ligamentum teres* must be dissevered, and the head of the femur thrown out of the acetabulum. If the spasm occurred while walking, it was almost impossible to maintain a standing attitude.

Fortunately these attacks were comparatively infrequent, and not of many days continuance. Previous to this time, however, I had had some twinges of pain shooting through the entire length of the limb. But now, as the local pain of the hip joint began decidedly to abate, slight muscular spasms were diffused through the whole length of the limb. There was a gradual augmentation of these feelings, accompanied with a general numbness of the leg, till Christmas. For nearly four weeks past there had been an unnatural coldness of the limb, with a general accession of pain along the track of the sciatic nerve and its branches, but chiefly in the course of the main trunk of that nerve.

During this time I suffered the greatest amount of pain while sitting, owing to the compression this position caused upon the posterior muscles of the thigh—experienced less on standing, and the least when in the recumbent posture. Meanwhile my general health was good, so that I had to some extent discharged the duties of my profession, though the pain was vastly increased for the time being, by exercise and exposure.

Little had been done, medically, up to the time above mentioned, except in the use of divers topical applications. On Christmas the numbness of the leg was immeasurably enhanced, and its motions were considerably erratic, being subject *only in part* to the control of the will. Associated with this was a flushed countenance, great vascular turgescence of the face and head, an almost insupportable pain of the right side of the head, increasing numbness, with a pricking, tingling sensation of the right half of the body, extending even to the tongue. With the co-existence of these concomitant symptoms, the necessity of having something done without much delay, was very obvious. Being of a plethoric, full habit, I bled myself to the extent of 20 ounces from the arm, and with almost instantaneous relief. The blood thus drawn, presented all the characteristic marks of sthenic inflammation, and to as great a degree as are ever seen in any inflammatory affection whatever. Without going

into the details of the treatment, I will here remark that a brisk cathartic was taken the following night, and on "New Years," as the pulse was 90, full and strong, venesection was repeated, but with not such signal benefit as before. About this time it became necessary to use great vigilance in order to keep the limb warm, being obliged, for this purpose, to lie with my foot as near to the stove as possible without burning it, by day, and to put jugs of hot water around it by night.

Coincident with this symptom, there appeared tenderness of the lumbar vertebrae, being the greatest at the sacro-lumbar connection. Continuing to increase, I could no longer lie on my back; and indeed the weight of a finger on the spinous processes of the vertebrae above named, would send such a peculiarly benumbing, pricking sensation, even to the ends of the toes on the affected side, and so exceedingly unpleasant withal, that it could not be tolerated for any length of time. Unmistakable evidence of inflammation of the sciatic nerve now appeared. It was perceptibly enlarged a part of the way from the hip to the knee, and so sensitive to the touch that the weight of a silk handkerchief falling upon that part of the limb, would produce violent spastic contractions. Wood's description of Neuritis affords an exact counterpart to my symptoms and feelings, as they existed at this time. Undoubtedly there was inflammation of the spine, and also of this nerve, previous to my discovery of the fact, for I had been unable to lie on my back or right side long at a time, for awhile previously.

For a few weeks past I had suffered much from deprivation of sleep, which, indeed, subsequently proved true for some five months, averaging, for that length of time, less than two out of the twenty-four hours. Almost the entire catalogue of narcotic and anodyne medicines were tried, both in ordinary and extraordinary doses, but with no apparent benefit. Pain at night was no greater than during the day, and atmospheric vicissitudes exerted no cognizable effect. Paroxysmal pain following the course of the sciatic nerve, had now become indescribably acute. And while I could not say that the intervals of rest were inappreciable, yet even these, for duration, would most aptly compare with those points of time between the "telegraph ticks," while the operator is speeding a message from the office over the wires. The feeling conveyed in the course of the nerve, was as if spasms ran through its entire length incessantly, except the momentary spaces of time to which allusion has already

been made. Perhaps a better idea of the nature and character of the pain can be obtained, if I state that I often found it mitigated by warm applications. On one occasion, though suffering no more than usual from spastic contractions in that part, I had a hot smoothing iron put in close proximity to the "calf of the leg," whereby a large blister was drawn, of which I was wholly unconscious at the time.

For awhile the only thing that produced any sensible impression or change of feeling, was to saturate a piece of cloth with chloroform, envelop the limb with it, and immediately cover that with oil silk. By this means I also drew a blister. Another method I resorted to in order to bring relief was, after being cupped in the sacro lumbar region, to apply a sinapism to the part soon after, and keep it warm by artificial heat. As the poultice penetrated the crifices made by the scarificator, it naturally caused a smarting, burning sensation, resulting finally in vesication. While experiencing the feelings arising from such an application, I usually obtained a refreshing nap.

Cupping having accomplished all that was expected of it, in diminishing spinal tenderness, &c., it was deemed advisable to commence blistering, which I speak of in this connection, for the sake of introducing some of the peculiarly strange effects resulting therefrom. Regarding the disease as having an intimate relation with, if, indeed, it did not originate from the spinal affection, my medical attendants suggested that the first blister should be applied directly over the sacro-lumbar region. Soon after it began to vesicate, the limb suddenly commenced jerking around in every direction, wholly independent of the influence of volition. The most determined efforts to counteract these unnatural, painful motions, were utterly unavailing. The blister was put on at bed-time, and some five hours elapsed before vesication fairly commenced. When it did begin, the motion of the limb became, consequently, so great, and irresistibly beyond my control, that my wife was thereby awaked from a sound sleep, to make the following pertinent and significant inquiry: "*What is the matter?*" As often as one blister ceased to discharge, the rule was to apply another—averaging at least two every week. In this way they were continued from the back down the entire length of the limb. Having traversed in this way the distance originally designed, I now came back to the spine again, "or

place of beginning." Strange as it may seem, as soon as the second blister, applied to the spine, began to fill, I was subjected to much greater anomalies than I experienced before.

Now both limbs were apparently in as violent and unrestrained motion as is commonly seen in tetanic spasms. Pain of the most excruciating character—the most severe, without exception, I ever suffered—in short, *amounting to agony*—continued till the blister was filled. Both limbs, after vesication commenced, and until its perfect completement, were in perpetual and unrestrainable motion, though not simultaneously, and generally moved in opposite directions. It may be proper for me to state that I had used the limb a little up to the middle of March. Let it be borne in mind, that I had not been able to sit through the entire winter; and all the exercise I now had consisted in going a dozen rods daily on crutches. March had nearly closed, and my limb had improved so rapidly and, as I supposed, permanently, within a few days past, that I was encouraged to hope and believe that it would soon be restored to perfect soundness. At this time I was able to lie on my back, and was more comfortable in all respects. Notwithstanding these hopeful circumstances, I was doomed to dire disappointment.

Finding that I was gaining so fast, to all appearances, I had remained in the house for several days past, taking extra precautions, that I might, thereby, avoid a relapse. But, unexpectedly, and without any assignable cause, there was a sudden aggravation of former painful symptoms—though they were wholly confined to the leg. Gradually the acute pain had passed away from this part of the system, and instead, soon after April came in, there arose a feeling, which I can no better describe than by saying: if it is possible to combine *that peculiur state* when the limb has been "asleep" for a long time, with that which is felt when the nerve on the point of the elbow is hit, then there is, though very diminutively, yet essentially, a realization of what I endured all the time.

On first assuming the erect position, this feeling was so quickly as well as so greatly augmented, that, as a general thing I had to sit down immediately; or, if persisting in attempts to stand, run the risk of falling from syncope. Uniformly this feeling would abate considerably after sitting a few moments; so much so, at least, that the pain was endurable afterwards while standing. The particular feeling to which I now refer, was not confined to the main trunk of the nerve, but seemed to extend to all its minute ramifications.

From this time (the first week in April), for the two succeeding weeks, the limb, in this respect, grew worse and worse, until it became nearly as bad in the recumbent posture—which had not been the case hitherto—as it had been when standing; in either respect it was almost insufferable. In connection with the above feelings was the sensation of *fullness*, seemingly almost to the bursting open of the limb.

Repetition of blisters now failed to alleviate the pain, unlike what they had done in the former part of my sickness; and though applied over the lumbar vertebrae, they did not give rise to the anomalous feelings that they had done on the two previous occasions.

April 20th. The same sensations in *kind*, but not in *degree*, began to extend to the right arm; and the transition was rapid, after the foregoing change, to the arm and limb respectively, of the left side. At this juncture, phenomena, evincive of cerebral disorder, first appeared, viz., *muscae volitantes*. Very soon thereafter was a perfect equalization of the *feeling*, as well as of the *temperature*, on both sides. Previous to this, the right limb had been cold, appreciably so to the feel, with a total absence of sensible perspiration; while the left had been naturally warm and moist. Just as soon as this condition of the system was fairly established, there was the introduction of another novel feature. After as comfortable a day as I had enjoyed for some time, and, in fact, more so than the average, at 6 P. M., I was suddenly seized, while in bed, with an impending sense of faintness—being followed shortly after with a general tremor, continuing for some two hours, but accompanied with no rigors—finally passing off with slight febrile excitement. Immediately succeeding the cessation of the paroxysm of fever, additional evidence of disturbance of the brain—"the great nervous battery" of the human system—was presented, in that I now began to realize something quite akin to electric phenomena, in both the upper and lower extremities: and, for the want of a better term, I will denominate them spasmodic shocks. These shocks, so far as one's feelings could afford a proper test, resembled in all respects those that are produced by the galvanic battery. Within two days from this time, this *feeling* had so increased in my legs and arms, that it seemed as if the system was completely surcharged with electricity. Occasionally shocks would run from the limb to the brain with such arrowy velocity, and with such severity too, that it seemed as if con-

vulsions must ensue. At this period the shocks were not confined to either limb, though both were never affected at the same time.

April 28th. In conjunction with the symptoms above described, this day I experienced great cerebral oppression, more especially of the left temporal region.

For twelve hours, on the following day, the shocks were so intense and constant in the left elbow-joint, that, apparently, I could not have suffered more if a large battery had been expending all its power upon that part of my system. Such was the exalted irritability of the radial nerve in this arm, resulting from the protracted concentration of the shocks at that point, that for several days afterwards, when attempts were made to examine the pulse in that arm, it sent such an unbroken succession of shocks to my head during the examination, as apparently to render the induction of convulsions, if persisted in, a necessary sequence. Co-existing with this, was the development of another peculiarity, viz. : if a person took hold of either hand, *and theirs was warmer than mine*, it gave me such an intense shock, that I would involuntarily jerk it away from them. But if the temperature of their hand was a little less than that of mine, it produced no sensible impression. While I was thus readily affected by others, no one ever experienced a reciprocation of this feeling. At this time I also found, when my feet became a little too warm, that I was obliged to change them to a cooler place; if not, shocks in rapid succession were sure to follow. The evening of the day in which I was most troubled with these feelings, one of my medical attendants came in, and finding that there was some oppression of the brain, with a partially paralyzed condition of the left eyelid, and a tendency to cold extremities, he advised a tepid pediluvium. As soon as my feet were immersed in the water, it sent such shocks up both limbs that it was impossible to endure them. Another expedient was then resorted to: instead of putting my feet in the water, it was applied to them with the hands, but with equally unpleasant results.

At other times, though they were in a cool place, there would be a sensation in the bottom of the feet, as if a current of heat, little short of vesication, was brought to bear on that part, and instantaneously there would follow a shock of great severity. Now, the nervous system was in a state of constant excitement—tremulousness of the head and arms, particularly—was such as to render it difficult to drink.

April 29th, there were fewer shocks, but a new phase of the disease was now introduced. When drowsiness came on, just as I felt that I was losing all consciousness of surrounding objects, *at that time* the feeling would seize me, as if the principal nerves were conductors of the lightning's flash, so sudden and so great was the sense of heat. Every recurrence of this feeling would cause me (notwithstanding the resolutions I formed previous to their accession to nerve myself to such an extent as not to yield to them) to change my position simultaneously with their supervention. Hence, from personal experience I found that I could fully endorse the orthodoxy of the sentiment so generally charged against our race, that it is easier to form resolves, than to carry them into execution.

So far as the *sense of feeling* is a criterion, I can compare it, for intensity and velocity, to nothing that will so nearly represent the matter truly, as the injection of some metallic substance in a state of fusion, into the whole vascular system. Both the upper and lower extremities, after a few hours, were as if the electric current were passing through and around the system, in a *full continuous flow*. On the back of the hands, particularly, *it seemed as if the current was just as full as it could possibly be, without effecting disruption of the cuticle*. Connected with this, was the feeling also, as if there was passing off from every pore an almost uninterrupted flow of electric sparks—possessing, so far as my feelings could decide, all the essential requisites of electricity; especially as it respects *that condition so peculiar to the surface*. Even those parts of the body naturally the least sensitive, were not exempt.

In order to obtain some relief, though temporary, it was necessary to move my limbs at very short intervals, but more particularly the arms. Oftentimes slight motion was sufficient, such as turning the hands over; but sometimes I was obliged to hold them up over my head for hours at a time. *Unless they were moved in some direction*, the most significant illustration that occurs to me is the feeling reminded me of, and seemed comparable to a stream of water that was dammed up by drift wood in time of a freshet. Merely moving the part so affected, would relieve me for the time being, of that sense of impediment or obstruction to the current's flow. Another feature in this case, was a *wave-like feeling*, passing incessantly from the back of the hands towards the chest, *and which seemed very apparent to my own touch*. It reminded me forcibly of that vibratory motion imparted to the hand when one strikes a cord tightly drawn,

as the string of a violin, for example. Striking gently on the back of the hand with any light article, as with a common wood pencil, for instance, would communicate the same sensation clear to the shoulder. So it was, also, with the right limb. On hitting the shoe on that foot against any hard substance, though ever so slightly, the feeling extended to the body was the same as if a cord stretched to its utmost tension, had been touched—thus imparting a sense of vibration that is peculiar and unmistakeable to the feel.

For a few days immediately preceding this, there had been a general exaltation of the sensory nerves. But at no time had there been paralysis of any part, except, partially, of the left upper eyelid, and the apparent approximation of palsy of the right leg, on Christmas.

Duplex vision, April 30th, was very marked, but no intolerance of light; tinnitus aurium had been quite troublesome for a few days past, and there was some difficulty in remembering what I intended to say, particularly if the sentence was of much length; neither could I always speak the identicle word I designed. Without explanation, for the foregoing reason, my meaning would not always be readily apprehended. Conscious, though I was of the defects here alluded to, still it was beyond my power to remedy them.

May 1st, the sense of hearing became exceedingly acute; comparatively slight sounds seemed, in volume, to approximate the cannon's roar. Conversation in the room was quite intolerable, if the individual speaking sat at right angles, and the sound of the voice could hardly be borne, even if it did not fall directly upon the tympanum. But it was utterly insufferable, if the person engaged in talking sat opposite me, and did not speak in a monotone. There was a time (though of but few hours duration) when the buzzing of a fly on the window of my room, was altogether unendurable. The last day of April was the time when the electric state of the system reached its culminating point.

This feature of the case was gradual from its inception to its acme; and equally so from its declension to its entire cessation. On the complete subsidence of this state, the tremor of the system also passed away.

Now I began to have occasional shocks pass through the organs of the chest, as well as the brain; and for a few days subsequently they increased slowly, the same as when they were confined to the extremities.

Early on the morning of May 4th, and without any premonition, I was suddenly seized with a slight tremor of the whole body—but affecting the Thoracic viscera most violently.

Intimately connected with this occurrence, was the profuse exudation of a cold, clammy perspiration, covering the entire surface. To my apprehension, physical exertion of myself or others, could have produced no greater or more uninterrupted commotion of any part of the body, than now affected the organs referred to. Respiration was short, hurried, and suffocative, with an almost insupportable sense of heat of the chest, rendering it necessary to open doors and windows for the admission of fresh air. The heart's action was preternaturally slow and labored, and its pulsations, which had usually been about 60 per minute during this sickness, were now 35, small and feeble.

Agitation similar to that which had affected the chest, was now communicated to the brain, centering chiefly over the sagittal suture. During this time the spasmodic flashes before the eyes were of such dazzling brilliancy as to be comparable to the lightning's glare for intensity, as well as for the suddenness with which they appeared. For six hours the pressure upon the optic nerves was so great that the lachrymal secretions were poured out most copiously. And for nearly twice that length of time it was impossible for me to move the eyes from a fixed point, having the object on which they were fastened directly in front of me, without immensely increasing the cerebral pressure, and causing a rapid succession of the most vivid flashes of light. The effect of the slightest appreciable motion of the eyes was immediate and peculiar. At the times when this light was most resplendent, the accession of spasms appeared inevitable. Inseparably connected with the symptoms stated above, was a violent, irregular, and *constant motion* of the right arm. Being much annoyed by it, I requested that its unnatural motions might be restrained. One person, however, failing to command the requisite amount of strength to control it, and judging from my feelings, if the effort should prove successful, that I should not experience the anticipated relief, it was permitted to go uncontrolled.

Gradually all the foregoing alarming symptoms passed away; vision, in three or four days, became natural; the sense of hearing, though more tardily, less acute, as well as the electric phenomena. Immediately connected with the diminution and partial subsidence of this electric state of the system, was the development of another

peculiarity. For three days thereafter a vigorous use of the flesh brush was needed to relieve an unpleasant, smarting, itching sensation of the whole surface. Urticaria, in short, would hardly have been more intolerable, though there was no cuticular elevation. Every pore, seemingly, participated in this feeling.

After May 15th, this electric condition was not apparent, unless I pushed my feet against some hard substance, or shut my hands tightly. By the last of the month it had totally disappeared. One thing is now worthy of notice. As soon as I began to *feel the shocks*, that indescribably unpleasant and anomalous condition of the right limb gradually passed away, so that there was no discernable difference in the limbs respecting the original form of disease. But with the decided remission of the electric currents, I began to realize a renewal of former feelings; and when they had perfectly subsided, the numbness, with all that concatenation of symptoms, forming in the aggregate such a strange medley at an anterior date, now returned with augmented power. Thus it continued for some three weeks, before there was any discoverable amendment, bringing the history down, in point of time, to the commencement of June. From that time I began to convalesce, the limb gradually regaining its natural feelings, so that by the middle of the month I was able to leave my room, after a confinement of three months. Up to July 17th, I continued to progress, though unable to bear much weight upon the right limb without adding materially to the pricking, tingling sensation, though it existed to some extent all the time. Exercise consisted wholly in riding or walking, with the aid of crutches. Sitting caused so much discomfort that I seldom attempted it. Aside from the limb I felt very comfortable, and had nearly regained my usual weight.

July 18th. Tonic spasms of the hip joint and sciatic nerve now returned with as much violence as when they occurred last winter. The nerve became exceedingly tender its entire length, with formation, pricking and tingling sensations, as severe as ever. Apart from the inflammation, the left limb, up to the date of this article, participated in the same feelings as the right. No headache; but during the preparation of this report, especially, there are occasional scintillations of such resplendence as to resemble the light caused by burning some metal difficult of combustion, by the aid of the compound oxyhydrogen blow-pipe. Excepting this, there is no other evidence of cerebral disturbance. With reference to this, as

well as the previous relapse, there is no ascribable cause. At the present date the limb is very sensitive to cold, which, indeed, has been true all the while. While it may be premature to venture an opinion, still, judging from the past, my impression is that doubts may very reasonably be entertained respecting the ultimate soundness of the limb.

Various medicines, alone and combined, were tried in my case. Were I asked the question, however, From what medicine or particular plan of treatment did you derive the most benefit? I frankly confess the answer I should unhesitatingly give, would necessarily partake of Delphic incertitude. When this report was finished, it is true, I had a seton in the sacro-lumbar region, and was pursuing a course of medication identical with that which was followed when the disease took a more favorable turn in June, but totally unlike that which was in use when the first mitigation of the symptoms occurred in March. Nevertheless it is equally true, while trying the plan so dissimilar in the spring, I apparently arrived as near to the point of recovery as at those of a subsequent date.

Respecting the treatment, it will hardly be expected that I should go into details. Suffice it to say that the depletory, revulsive, alterative, sedative and anodyne medications were persistently tried, separately, and in many of their combinations. Blood-letting, general and local, active cathartics, blisters, a seton, mercurials carried to ptyalism, and afterwards arsenic, were made use of. Also, in different stages of the disease, carb. ferri, strych., sulph. quin., iod. potass., opium, in all its varied forms, and the whole list of narcotics, tinct. verat. viride, vin. colch., &c., &c., were variously tried, and with equally indeterminate results.

It may be proper to state, after the change of symptoms on the 4th of May, the plan of treatment most thoroughly tried, was a pill of arsenic, strych., opii. and belladonna; after salivation from the arsenic, a pill of the other ingredients was continued; also mur. am.

Topical applications, besides blisters, were spts. turp., camph. spts., tinct. opii. and tinct. lyttæ, āā; chloroform alone, and combined with aq. am. and tinct. aconite, āā, and tinct. aconite alone; nitro-mur. acid bath, &c.

Twice, in February, the galvanic battery was used, and with decidedly unpleasant results. Once the inhalation of a small quantity of chloroform was tried, as an experiment, to relieve the electric

shocks, but it produced so much cerebral irritation as to forbid its use a second time.

Thus I have endeavored to present a faithful portraiture of the facts as they occurred in connection with my sickness. While they are presented somewhat desultorily, and possibly some may have been forgotten, still nothing that is important and *germain* to the subject has, I think, been omitted.

Keeping no notes at the time, it would be strange indeed, in writing a subsequent history of the case, if every symptom and occurrence could be produced exactly in the order in which they transpired. Yet there are circumstantial facts, by means of which I have been enabled to fix dates. Having no disposition to theorize in connection with the foregoing, all I have attempted or designed, was to narrate the facts for the inspection of my medical brethren.

Explanatory of what may be supposed to have had any influence in superinducing this disease and the strange symptoms attendant thereon, I offer the following suggestions, in the form of inquiries :

1st. Has the practice of medicine, especially in the country, with the extra amount of labor connected therewith, with, perhaps, undue anxiety for patients, any immediate or remote bearing upon this subject? Excessive solicitude respecting the ultimate recovery of patients, physicians know, from experience, not only depresses one's feelings by day, but also deprives them of quiet repose by night. And while we would by no means wish to be destitute of sympathy for the sick and distressed, and particularly if their lives are in a measure, committed to our keeping; still, is it not true that some may be so constituted—in other words, possess such a temperament—that, in spite of themselves even, it will exert an improper and exhausting effect upon the nervous system?

2d. Is a key to the solution of any, or all of the foregoing symptoms, furnished, when I state that, for the last eight years, I have had frequent attacks of coryza, resulting at length in catarrh? When most severe, they have confined me to the house from two to five weeks. In August, 1854, I contracted a cold, which was directly referable to a current of cold air blowing upon the top of my head, causing the most severe catarrhal attack, from which I ever suffered. Pulse from about 80 per minute in health, at such times are uniformly 44—small and feeble as an infant's. During these attacks I have often taken sulph. quin. \mathfrak{c} i, sulph. morph. gr. i, and wine \mathfrak{o} j., or a gill of brandy, in 24 hours, without appreciably

affecting either the fullness or frequency of the pulse. All I could assert regarding this plan of medication, was, it probably kept me from complete and fatal exhaustion. Obstinate wakefulness, amounting to an almost total deprivation of sleep, for about three days previously, superadded to that extreme prostration of "the nervous apparatus" so inseparably connected with it, gives rise to a train of feelings and symptoms quite indescribable. Language utterly fails to fulfill one's behest in conveying an adequate impression of the *kind* or *extent* of the sufferings endured ; so that I cannot produce, if I were to try, anything like a faithful potraiture of what I have experienced on such occasions. Morbid vigilance necessarily produces, when carried to the degree above spoken of, an intolerable sense of cerebral exhaustion or depression. Associated with the loss of nervous energy is, of course, great muscular debility. Exemption from these attacks, at any particular season of the year, I cannot claim. But the *greatest susceptibility* is when atmospheric changes are the most sudden, and hence the most favorable for inflammatory diseases. During the changeable weather of the autumnal, winter, and spring months, I find it absolutely requisite, in order to prevent the contraction of this form of disease, to protect the nasal membrane, when exposed to the damp, chilly air ; and also to avoid currents of cold air from blowing upon the head. Exposure in either respect is sure to bring it on.

3d. For twelve years or more I have been subject to a severe aphthous condition of the mouth and fauces. The whole interior of the mouth, including the tongue, has been equally liable to this affection. Many a night I have been obliged to lie awake, from very pain, till one or two o'clock in the morning—relieving the inflammation, partially, by holding cold water in the mouth. Sometimes I have had as many as five at once, continuing almost invariably for seven weeks, before healing, and then leaving a cicatrix. Bread, or mush and milk, at such times, owing to the inflamed and abraded condition of the mouth, come to constitute, from necessity, almost my only diet. Dyspepsia is something I never knew anything about experimentally. Wearisome days and restless nights, arising from the foregoing cause, and forming the rule rather than the exception of life, led me to feel the absolute importance of adopting more effective measures for the alleviation and radical cure of the aphthae. Topical applications scarcely afforded even temporary benefit. Various constitutional remedies were persistently tried, but failed to

furnish the anticipated relief. Impressed with the belief that *stock ale*, or *tobacco* would prove useful, I chose the latter as "the least of the two evils." Opposed, from principle and habit, to the use of either article, it subjected me to a strange conflict between a sense of *pain* and a sense of *duty*. Deciding, however, in favor of using tobacco, I suppose I encountered the same difficulties that are common to most when they first attempt to "use the weed." Notwithstanding "the force of habit," unlike many, I cannot now say even that the *quid* is a precious morceau. For some three years, by daily chewing this narcotic, my mouth kept nearly well. At the expiration of that time, it measurably lost its specific effect. Anxious to avoid the excessive pain which would attend the reappearance of the disease, as a *dernier resort*, I commenced the daily use of ale. Conjointly used, these two articles prevent the recurrence of aphthæ. When unable to use either, from illness, it always "returns with redoubled violence."

Among the more noticeable specialities of this case, the following may be mentioned :

There was so little febrile excitement that my appetite was but slightly impaired, though my diet consisted principally of the lighter and more readily digestible articles. Pulse generally less than 60.

Secreting and excreting organs were natural.

Narcotics, though continuously taken in minimum and maximum doses, seemed wholly unavailing—neither mitigating pain, nor inducing sleep.

Artificial heat, to the extent that could be borne by every other part of the system, giving warmth and moisture thereto, produced no sensible effect in either respect upon the affected limb. It still remained cold and dry till the electric fluid passed away.

That unnatural condition of the system which, for the want of a better or more definite term I shall denominate *electric*, possessing apparently all the essential requisites of the disruptive discharge, except in not giving off the electric spark, was gradual in its commencement and decline. But on its total subsidence, there was no visible improvement of what may be considered the original disease.

After the marked melioration and progress the latter part of March, that there should be an augmented return of the original affection, without any known or knowable reason, and with the *electric complication*. Perfect quietude and confinement to the house

had been observed for some time previously. Equally mysterious was the cause of the relapse in July.

Furthermore, that the cerebral phenomena should pass away with the abatement of the electric currents.

Whenever there was the least tendency to convulsions, that the body should instantly and involuntarily, though perfectly conscious, incline to opisthotonos.

Besides my regular medical attendants, Dr. H. F. Dean, of this place, and Drs. Reed and Ford, of Norwalk, Huron county, I was also seen by the following physicians, in different stages of my sickness : Drs. Baker, of Norwalk, Cook, of Monroeville, and Smith of Lyme—all of Huron county ; Prof. Delamater, Sen., of Cleveland ; Drs. Caldwell and Morse, of Huron, Cochran, of Sandusky City, Trembly of Florence—all of Erie county ; and some other medical gentlemen.

For a remarkable instance of Animal Electricity, see a case reported by Prof. Mussey, in the *Amer. Jour. of the Med. Sciences*, No. 42, February, 1838, page 377 ; and also more fully reported by Dr. Hosford, the attending physician, do. page 533.

Thirteenth Annual Session of the Ohio State Medical Society.

DECIPLES CHURCH, MASSILLON, June 1, 1858, 10 A. M.

The Ohio State Medical Society met pursuant to adjournment, and in the absence of the regular President, Vice President and Secretary—on motion, Prof. Kirtland of Cleveland, was called to the chair, pro tem., and Dr. Metz of Massillon, was elected Secretary.

Dr. F. T. Hurxthal, on behalf of the Ex. Com. of the State Med. Soc., made a report of place of meeting, sessions, order of proceedings, etc., for this session of the Society, and in a brief speech, excellently neat—well expressed, and in good taste, welcomed the members of the Society to Massillon, and Massillonian hospitality.

On motion of Dr. Spillman of Medina, the report of the Ex. Com., and the address of Dr. Hurxthal, ordered to be placed on record.

Dr. Metz being the only member of the Com. on admissions present, the chair appointed Drs. Kincaid, Bronson, Firestone, Boyd and Carey, to fill up the committee.

On motion, Drs. Spillman, Gordon, R. Thompson, Mitchell and Sennitt, were appointed a committee to report officers for the ensuing year; after a short absence, they reported the following names: *President*, Dr. Hurxthal, of Massillon; *Vice Presidents*, Drs. S. M. Smith, DeLamater, Kirtland, and Firestone; *Secretary*, A. Metz; *Treasurer*, T. J. Mullen; *Librarian*, J. B. Thompson; *Com. on Admissions*, Drs. Kincaid, Bronson, Boyd, Carey, and C. P. Landon. The report of the committee was confirmed by vote of the society, and Drs. Kincaid and R. Thompson were appointed to conduct the president elect to the chair.

The President thanked the society for the honor conferred, in a brief address.

Dr. Spillman offered the following:

Resolved, That a committee of three be appointed to furnish the presiding officer with a detailed list of the business, as it appears from the transactions, and that Dr. Kincaid be chosen chairman of that committee. The chair appointed Drs. Kincaid, Firestone and Gordon.

Dr. Sennitt offered the following, which, on motion of Dr. Kincaid, was laid on the table:

Resolved, That the amendment of the sixth article of the Constitution, as proposed by Dr. Jones, at the last session, to wit: striking out the words "ballot and," be hereby agreed to.

Dr. Forbes offered the following:

Resolved, That the members who have papers to read before the society, be requested to give the titles of the same to the Secretary at their earliest convenience. Adopted.

Dr. Forbes read a circular from the Indiana State Med. Soc., which, on motion of Dr. Landon, was laid on the table.

On motion of Dr. Kincaid, Dr. H. M. McAbee was elected assistant Secretary.

Dr. T. W. Gordon gave notice that he would read a short paper on Scarlatina.

Society adjourned until afternoon.

AFTERNOON SESSION, 2 P. M.

Society convened; President Hurxthal in the chair. On motion,

the chair proceeded to appoint Drs. Firestone, of Wooster, Forbes, of Toledo, and Stanton, of Salem, to fill vacancies in the committee on vaccination.

Dr. R. Thompson gave notice of a paper on Fractures, also a report on Hygiene ; both made special order for to-morrow.

The President gave notice of a paper on Ergot, by Dr. McMeans of Sandusky, to be presented by Dr. Conklin.

On motion, the circular of the Indiana State Medical Society was taken from the table, and, on further motion, was referred to Drs. Slusser, Myers and Reisinger, as a special committee to report to this body what action is advisable with reference thereto.

Dr. Hudson gave notice of a paper on Scarlatina, resulting in mortification of the right limb, and amputation successfully performed.

Dr. Spillman presented the Constitution and By-Laws of the Medina County Medical Society, which, on his motion, was referred to the committee on Medical Societies.

The resolution of Dr. Sennitt in reference to an amendment of article sixth, was taken up, and after considerable discussion, was lost.

Dr. Gordon read his paper on Scarlatina, which, on motion, was referred to the committee on Publication.

Dr. Hudson read his paper on the same subject, which was also referred to the committee on Publication ; after which there was an interesting discussion of the whole topic, participated in by Drs. Kincaid, Allen, Thompson, Bronson, Smith, DeLamater, Kirtland, Helmie and Gordon.

Dr. Munson gave notice of a paper on Strychnine.

Society adjourned until 9 o'clock A. M. to-morrow.

WEDNESDAY, 9 O'CLOCK A. M.

President Hurxthal in the chair. The minutes of yesterday read and approved.

The President announced Drs. Henderson, Boyd, Bronson, Sennitt, and Landon, the committee on Finance.

Dr. Landon stated that Dr. Gordon had in preparation a popular lecture, and moved that he be requested to deliver it to the profession and the public, on Thursday, at 2 o'clock P. M. Amended by Dr. Sennitt, to be at 7 o'clock P. M., and thus prevailed.

Dr. R. Thompson read his paper on fractures, accompanied with

explanatory remarks. The paper was referred to the committee on Publication, and several of its topics were discussed by Drs. Forbes, Crume, Gordon, Thompson, McAbee, Henderson, Harman and Cole.

The subject of Dr. Gordon's popular lecture, was announced to be "Modern Miracles."

The committee on Admissions reported Dr. Wm. Trevitt for honorary membership. On motion, unanimously elected.

The President presented an account of Dr. Gordon for traveling expenses incurred as chairman of the investigating committee, in the case of Wright against Wood. On motion, account referred to Finance committee.

AFTERNOON SESSION, 2 P. M.

The President in the chair. President read a communication to the society, from Dr. Tilden, "on the Duration of Life, and the art of preserving it." Referred to the committee on Publication.

Dr. Gordon, from the committee on Medical Societies, recommended that the Medina County Medical Lyceum, be recognised as auxiliary to this society. Motion agreed to.

On motion, Dr. Cochran's report, as Treasurer for last year, was referred to the committee on Finance.

A communication was read from Dr. Gundry, asking to be continued on the committee on Insanity, for the ensuing year. Request granted.

Dr. Slusser moved that Dr. John A. Murphy be continued on the committee on New Remedies, for the ensuing year. Adopted.

On motion of Dr. Myers, a committee was appointed to investigate the subject of opium eating. Drs. H. M. Myers, S. Glass and J. D. Robinson were appointed that committee.

On motion, it was voted to allow new members to purchase volumes of previous transactions, at publisher's cost.

Dr. Munson read his paper on Strychnine. Referred to committee on Publication, and discussed by Drs. Harman, Loving and Kirtland.

On motion, adjourned to meet to-morrow at 8 o'clock, A. M.

THURSDAY, 8 O'CLOCK, A. M.

Society met pursuant to adjournment. Vice President Dr. S. M. Smith in the chair. Minutes of yesterday read and approved.

The special committee to whom was referred the papers on the

Secretary's table, reported a paper by Dr. Conklin on Ergot. On motion, referred to committee on Publication; also reported a letter from Dr. Wm. H. Mussey, requesting to be continued on the committee on Medical Surgery; which was granted.

Dr. Harman, from the committee on Ethics, reported a paper by Dr. Hildreth; which, on motion of Dr. Crume, was laid on the table.

By permission, Prof. Kirtland made some further remarks on the use of Strychnine, as referred to in the paper of Dr. Munson.

A communication was read from Dr. Holston. Laid on the table.

The committee to whom was referred the circular of the Indiana Society, made the following report:

In regard to the interchange of the transactions of our society with kindred institutions, as one calculated to promote the object of our organization, recommend the adoption of the following amendment to the By-Laws:

It shall be the duty of the Librarian to send a copy of each year's transactions, as soon after their publication as convenient, to every State Society in the Union, with a request to exchange.

L. SLUSSER,
J. S. REISINGER,
W. H. MYERS.

On motion, the report was referred to the committee on Publication.

Dr. Landon moved that the Librarian be instructed to forward a copy of the transactions for 1857 and 1858, to the Indiana State Medical Society. Adopted.

Dr. Kincaid read a paper on the effects of *Canabis Indicus*, with a report of a case. Dr. Hughes, Prof. Smith, and others, discussed the use and application of the remedy.

An order was drawn for \$13 88 in favor of Dr. Gordon, in accordance with a report from the Finance committee.

Prof. Smith offered the following, viz:

Resolved, That Drs. Slusser, Ashman, and Kincaid, be appointed a committee to investigate the subject of Asylums for Inebriates, accumulate the facts well authenticated, and present the subject at the next Legislature.

The subject involved in the resolution was discussed by Drs. Smith, Hamilton, and Slusser. On motion, the resolution was adopted.

Prof. Gustave C. E. Weber, at his own request, was continued as a committee on diseases of the eye.

Report on Hygiene, by Dr. R. Thompson, was read by Dr. Thompson, jr. On motion, laid on the table for future discussion.

Dr. Bronson moved that a committee of three be appointed to select a place of permanent meeting for this society. Laid on the table.

Resolutions of thanks to the citizens of Massillon, for their handsome and generous hospitality, and to the officers and members of the Disciples Church for the use of the church, were adopted.

Recess till afternoon.

AFTERNOON SESSION, 2 O'CLOCK.

Society met, with Vice President Firestone in the chair.

On motion, Drs. Kincade, Landon, and Wilson were appointed a committee on *Canabis Indicus*.

Dr. Spillman gave notice of an intention to move an amendment to the By-Laws, so that any member three years in arrears, may be expelled after action has been had by the committee on Ethics, as provided for in the Constitution in other cases.

The President made the following announcements of committees, viz :

Special committee on Ovarian diseases, Prof. John DeLamater; delegate to Indiana State Medical Society, Dr. Forbes; delegate to Kentucky State Medical Society, Dr. Firestone, of Wooster.

Committee on Publication, Drs. John Dawson, J. W. Hamilton, P. M. Crume, Landon, and S. M. Smith.

Delegates to the National Medical Association. [List of names not handed in.—Eds.]

Committee on Ethics, J. Harman, Loving, Crume, John Thompson, and S. M. Smith.

Committee on Uterine diseases, Prof. S. M. Smith.

On Obstetrics, Dr. A. Metz, of Massillon.

On Surgery, Prof. J. W. Hamilton.

On Medical Literature, Dr. Thos. W. Gordon.

On Anesthetics, Prof. S. Loving.

Dr. Slusser called the attention of the society to the registration law of this State, which called out a discussion in which many members participated, and which resulted in the adoption of the following:

Resolved, That Drs. John Dawson, S. M. Smith, and Vattier, be

appointed a committee to confer with the next Legislature on the subject of amendments to the registration law. And this committee was instructed to report at the next meeting of this society.

Dr. Metz appointed to report on *Veratrum Viride*.

On motion, Columbus was selected as the place of meeting for next year.

The President announced the following committees, viz :

On Obituaries, Dr. Landon ; on Typhoid Fever, Joel Pomerene ; Executive Committee, Drs. J. W. Hamilton, Eels, R. Thompson, R. N. Barr, and J. B. Thompson.

During the session of the society the following new members were admitted :

Drs. L. Slusser, Fulton ; S. Loving, Columbus ; A. C. Miller, Orville ; Samuel Glass, Hayesville ; W. H. Myers, Loudonville ; H. M. McAbee, Massillon ; J. W. Shively, Navarre ; J. D. Otis, Navarre ; J. V. Shertzer, Massillon ; James Hughes, Berlin ; G. W. Brooke, Ellsworth ; D. K. Bartlett, Washingtonville ; C. H. McCarty, Albion ; B. B. Brashear, W. S. Battles, W. M. Prentice, Ravenna ; C. A. Perdue, Greensburgh ; N. Baker, Lucas ; J. Pomerene, Mt. Hope ; D. S. Gans, Pierce ; J. E. Dougherty, Greentown ; K. G. Thomas, Alliance ; P. Wallace, Canton ; J. G. Coates, Canal Dover, and J. H. Day, of Lima.

Further votes of thanks were passed to the Executive Committee for their efficiency in rendering the visit of the society to Massillon so agreeable. To the officers of the present session, for the able and impartial performance of their duties.

The Executive Committee for the ensuing year extended a most cordial invitation to the members of the society to be present at its next session in the Capital City.

The committee on Finance reported a bill in favor of Dr. F. T. Hurxthal, for six dollars; and order for that amount drawn accordingly.

On motion of Dr. Spillman, adjourned to meet at Columbus on the first Tuesday of June, 1859.

F. T. HURXTHAL, M. D., President.

A. METZ, M. D.,

H. M. McABEE, M. D.,

Secretaries.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

On the Absence of Phthisis in some Areas, and in the rarified air of Elevated Regions. By A. MUHRY, of Gottingen. Translated from Henle and Pfeufer's Zeitschrift. Vol. 7, No. 3, for the Charleston Medical Journal and Review, by A. Coffin, M. D.

The geographical appearance of Phthisis seems to be of the greatest importance, causing, as this disease does, so great a percentage of the mortality of the human race. Pulmonary Tuberculosis is absent in no zone and by no means in the tropical zone, where it even seems in some places to occur with greater frequency. Consequently the geographical distribution of temperature can have no influence on its appearance—although, as is well known, cold, and the sudden change from warm to cold especially, has an injurious influence on the already diseased lung. On the other hand there are

I. Certain areas in all zones where it more rarely appears, or is entirely absent, and

II. A very great probability of its decreasing frequency in proportion to the increase of perpendicular elevation.

1. *Areas enjoying an exemption from Phthisis.*—In the Polar Zone we find some regions positively indicated in which it is rare—*e. g.*, Iceland and the Faroe Islands. Panum and Schleisner, two reliable observers, gave this report, the former for the Faroe, the latter for Iceland. But this exemption is not enjoyed by the whole of the Polar Zone. Rabe reports it as very frequent in Finland, and Rud. Ritcher in Archangel. Of Siberia and the American cold zone we have no information, as it is not mentioned in any reports known to us. But in Greenland, it is reported among the indigenous diseases, by the missionary Cranz, who resided there a long time.

In the Temperate Zone we encounter a great spread of Phthisis, both in the Northern and Southern part; but three areas may be named as enjoying a great immunity. We must, however, always keep in mind the well-known fact, that Northerners, already subjects of Phthisis, when removed southward, find themselves better or entirely restored by the higher and more equal temperature, for we are now only treating of such regions where Phthisis encounters decided endemic obstacles to its production.

1. Its rarity in *Algeria* is reported by several reliable French military surgeons. Guyon says that Phthisis is very scarce, particularly among the Arabs; but, even among the French troops its pro-

portion to the entire mortality in four years was as one to thirty-two. Dubreym reports that diseases of the respiratory organs hardly ever occur in Staoueli. Haspel assures us that Phthisis is very rare even among Europeans.

2. In *Egypt* we have the certain testimony to its rareness of well-known physicians, who have lived and practiced there a long time. Hamont reports it as very rare among those coming from the north, but frequent among the negroes from the South. Clot Bey says that it is very rare among the Egyptians, but that the negroes coming from the South bore the cooler climate very badly, while Europeans even recovered from it. Griesruger declares that it is decidedly scarcer than in the middle of Europe, and recommends Egypt as a suitable resort for Phthisical patients. * As a proof that the moderate temperature does not oppose the obstacle to its prevalence, Brocchi, Lefebore and others report it as not at all rare in Nubia and Abyssinia.

3: A third area in this zone which is said to be even perfectly free from Phthisis, is the Kirgisen Steppe, near Orenburg, although it is by no means rare in Orenburg itself. Meydell, a Russian physician, says that it does not exist among the Kirgisen, and that the best remedy for it is their kumis, (fermented mare's milk,) which constitutes the greater part of their nourishment; so that we have here rather a dietetic than a climatic cause for its absence.

We come now to the tropical zones; and here we must premise that Phthisis does not occur less frequently in the hot zones than in the cold ones as a general rule. This fact recognized, we can distinguish more plainly certain regions which are decidedly freer from it. In America, between the tropics, on the hot Plains, Phthisis is not only present, but particularly prevalent. In the West Indies it appears among the European troops even more frequently than in England. On the island of St. Vincent, Hunter reports it as taking one of the most prominent places in the bills of mortality of the troops; that while the aggregate mortality was 47 per thousand, that from this disease was 10 per thousand. In the Danish island of St. Thomas, it was "not rare." In 1845, the deaths from it were 71 in a total of 306, and in former years in proportion. A North American physician says of the Isthmus of Panama, Phthisis is the disease of which most of the natives die. (Griswold: *The Isthmus of Panama and what I saw there.*) Tschudi mentions it as "very frequent," and it is looked upon as contagious. Unance testifies to its being "not unfrequent" in Lima, so also does Arch. Smith. On the east coast of South America, with its finer climate, *e. g.*, in Brazil, Sigaud teaches us that it is as prevalent as in Europe; that in the sea towns it forms one-fifth of the whole mortality. Keudu bears similar testimony. In *Africa*, Raffeuel says that in Senegambia it belongs to the principal diseases. On the contrary, in Senegal, Angola and Benguela, Thevenot and Omboni remark that it is rare. It is reported to exist on the east coast of Africa, in Nubia, and the fact of its being considered contagious, speaks for its frequency. In

Abyssinia, it is said to be not unfrequent, though a distinction must be made between the coast and the highland. On the other hand, in East India, over a considerable region a great immunity is enjoyed. In Madras, the native troops enjoy this exemption in a higher degree. So also do the Europeans, but less completely, according to Balfour's report. This is the case both on the coast and in the highlands. A convincing proof of this singular salubrity as far as regards Phthisis, is obtained by a comparison between the statistics of this disease in several other climates, among the English troops. Its proportion in a space of seven years, 1830—1836, in the European troops, in England itself, was 5 per thousand; in the West Indies, 6 per thousand; in Jamaica, 7 per thousand; in Canada, 5 per thousand; in Malta, 3 per thousand; at the Cape, 2 per thousand, and in Madras, in the elevated plateaus, 7-10 per thousand, and on the coast (Sadey) only 2-10 per thousand. That in East India, climate and not race, is the obstacle is apparent, as also that this exists in a high degree. We have further proof of this position. In Calcutta, Webb found among 460 sections, only thirteen cases of Phthisis. He also reports the statement of the physician to a prison, (Green of Madrapore,) that among 14,313 prisoners, there were in thirteen months, 2,339 sick, but among them only fourteen of Phthisis. Endemic Phthisis is said by Wilkes to be very rare in the Fejee Islands.

In the *temperate zone of the southern hemisphere*, which is so distinguished for its general salubrity, Phthisis is particularly prevalent. An exception is made in favor of the Cape according to above quoted military reports, while not far from there at Port Natal, Black mentions it as very common among the Hottentots, less common among the Caffers.

2. *The very great probability of the decrease of Phthisis in proportion to increasing elevation.*—In more elevated regions, pulmonary tuberculosis seems decidedly to decrease, in consequence of the rarefied air. The facts that we possess in favor of this proposition are not sufficiently numerous as yet to be satisfactory, so that we are obliged to state a truth as if it were an hypothesis; but I have met no geographical or nosographical statements which disprove it. And so important a question deserves that even imperfect data should be taken into consideration, when they contribute to direct attention to them, particularly to the pathology of more elevated regions. This pathological inquiry has drawn the less attention to it from the fact that in Europe few places of residence are situated so high as to make a decided difference in the constitution of their diseases apparent. Yet rarefied air is that element which acts as an obstruction to Phthisis, and there are few inhabited spots in Europe, which, in their perpendicular elevation, show a difference in the barometrical average of over $2\frac{1}{2}$ inches, therefore, under 26 inches atmospherical pressure, in other words, lie over 2,000 feet high. It is quite different in regard to the endemically present constitution of disease on the terraces and levels of the mountains in the tropical zone. As a

point of comparison we may remark that the whole interior of Mexico forms one grand continuous table land of 6,000 to 7,000 feet in height. Still more is this the case along the Cordillera range, in South America, in New Granada, Equador, Peru and Bolivia, with its broad and manifold table lands, containing many populous towns and provinces, some of the smaller lying over 13,000 feet high. With the exception of the Himalaya mountains, concerning which, however, we are not in possession of the requisite information, there is hardly on the surface of the earth a section where the mountains present so massive a construction, and which is peopled so extensively, and so high up. Unfortunately we do not possess definite information, still less statistical data about the proportionate prevalence of disease among the highlanders, who are estimated to number, along the whole range of the Cordilleras, from one tropic to the other, and at an elevation of 5,000 feet, at least two millions. Neither Spanish reports nor works of travel give us any information in regard to the subject of our special investigation. In Europe, on the contrary, the opportunities for observation on the effect of a residence in rarefied air, are few and limited. Switzerland, Savoy, and Tyrol, are looked upon as very elevated lands; and yet this is only true of the mountain tops; the neighboring plains, for example, in the Canton Bern, are only 1,800 feet high. The same moderate height is possessed by the greater part of the table lands of any extent in Suabia, Bavaria, the Harz, Bohemia, and other countries. In England, particularly, there is hardly a place worthy of mention lying over 500 feet high. In Spain, Castile is 1,800 feet high. In France, the highest level, that of Auvergne, is only 2,200. There are only a few small inhabited points which lie higher than this—*e. g.*, the town of Brancow, on the borders of Savoy, lies over 4,000 feet high, and has a population of 2,000. The valleys of Eugadin, and Davos, in Switzerland, the former containing 11,000 inhabitants in its plains, which lie at an elevation of from 5,500 to 5,700 feet; some villages in the Pyrrhenees, Appenines, on *Ætna*, besides the Senners of the Alps and the Monastery of St. Bernard, (7,370.) Thus, not only temperature, but the formation of the mountains seems to prevent residence at a greater elevation in Europe. We can thus account for our not only having remarked the decrease of pulmonary tubercles with the increase of perpendicular height in European pathology, but also for the general want of an orographic pathology. Let us now go through the zones in order, with reference to our special question.

The polar zones must necessarily be excluded. Here, where the snow line reaches at the highest, 1,900 feet, there can be no question of a population at a high elevation and in rarefied air.

As for our temperate zone we have already mentioned the reasons why we have little opportunity of perceiving very decided differences. But even those opportunities that we have, have not been sufficiently appreciated. Traces of the decrease of pulmonary consumption should be perceptible at lesser elevations if the whole law is true. We have data which really demonstrate that Phthisis is

rarer for example, in the Harz mountains, the mountains of Thuringia, the black Forest, at elevations of 1,800 to 2,000 feet. (V. Casp. H. Fuchs Medical Geography, 1853.) And I believe that I am right in stating that in Switzerland good effects have been experienced by phthisical sufferers from a protracted residence on the Rigi. To this may be added confirmatory statements from America, from New Mexico and Texas, about 30 deg. N. L., although the elevations alluded to are not particularly mentioned. Emil Meyer says in his "Notes on Texas," that the western elevated portion of Texas is a favorable country for consumptives; and Buxton in his *Adventures in Mexico*, reports that the high lying prairies of New Mexico exercise a restorative influence on pulmonary invalids, in consequence of the rarefied state of the air.

In the tropical zone, as already said, can we find the best and most convincing proofs. The opportunities for this are found in many populous towns and provinces, particularly in America, on the terraces, and more elevated table lands and plateaus of the Andes range, where the temperature allows the existence of an active numerous mining population, at an elevation of 13,500 feet—*e. g.*, in Cerro de Pasco and Potosi. Well known towns lie there at least 7,000 feet high, for example: Mexico, Tlalpujahua, Santa Fe de Bogota, Quito, Arequipa Cuzco, Cuenca and others. In East India, there are indeed such populations living in rarefied air, not only on the south slope of the Himalaya, but also on the high table lands of the Peninsula and in Ceylon; but they are not suited to our investigations, for in the first place the elevations are not so great, and secondly, as we have already seen, the whole of East India enjoys an almost complete immunity from Phthisis. We cannot, therefore, obtain much assistance from the Sanatoria erected there by the English since about twenty-five years, and seated at least 6,000 feet high. In Africa, on the other hand, opportunities are not wanting but observers are.

We come now to those positive and reliable statements which assert the absence of Phthisis at considerable perpendicular elevation, and especially, we may add, in those parts of the earth where it is not rare on the low lands.

In Mexico, nearly 7,000 feet high, Phthisis is mentioned by R. Newton, in his "*Medical Topography of the city of Mexico*," as rare, although catarrhs and bronchitis, diseases which elsewhere are only of frequent occurrence in company with Phthisis, are here mentioned as frequently unconnected with it. It is to be regretted that we do not possess a single hospital report for a year from this large but remote capital, which can be of service in facilitating our decision. Of the other towns the same may be said. We have, it is true, the statements of travelers, reliable, but not drawn from statistical reports. Mühlenpfordt describes the workers in an elevated mine as healthy, and mentions pneumonia but not phthisis. In the *Journal of the Academy of Medicine of Mexico*, for two years, we have valuable documents proving the presence of typhus, influenza, and pneumonia, but nothing about phthisis.

The few reports that we have about Santa Fe de Bogota (4 deg. N. L., 8,100 feet high), and Quito (0 deg. 14 m. S. L., 8,970 feet high) never mention phthisis. This negative proof may be found in the celebrated old voyage of G. Juan and A. de Ulloa (Madrid, 1748), and in Molliens Voyage (Paris, 1824). Humboldt and Bonpland report the barometrical height for Quito at 20 m., and for the Rancho of Anlisano, which lies 12,600 feet high, at 17 m. 4 s., and add, "the inhabitants of these elevated spots enjoy the best of health. A resident physician of the town of St. Luis de Potosi, S. Encausse, reports the average temperature at 15 deg. Reaumur (67 deg. Fahrenheit), the elevation about 5,500, and mentions the prevalent diseases, but we do not find Phthisis among them.

We have fortunately some positive accounts of the highest inhabited spots in the Cordilleras. J. Tschudi, who had lived nearly five years in Peru, after having remarked on the great frequency of Phthisis on the lower sea coast, reports it as "extremely rare" in the highest region, that is over 12,000 feet high. Somewhat lower down, on the east side of the high mountain ridge, that is 8 to 10,000 feet high, he repeats that it is "somewhat rare," and does not exist among the Indians, who otherwise by no means enjoy an exemption from it. His more exact words are: "Tuberculosis and Phthisis are in the Puna region extremely rare; the former is, perhaps, entirely wanting. The native Indian seems to enjoy a complete immunity from pulmonary Phthisis; Scrofula is, nevertheless, not entirely absent." A confirmatory and more decided report is given us by Archibald Smith, who lived for nine years principally in Lima, but also one year in Cerro de Pasco, in active practice. He says that in Lima the hospitals are well provided with consumptives, but that certain conditions of the atmosphere dependent on the different degrees of elevation, appeared to promote or impede the origin and development of consumption. Thus on the coast it is a common disease, but on the middle slopes of the Cordilleras it is rare, and those suffering from it find either alleviation or cure by a residence at places from 5 to 10,000 feet above the sea. Hæmoptysis is very frequent among all classes and races in Lima, exciting great anxiety, but in Peru, the more elevated climate is looked upon as all powerful for its cure. The resorts for this purpose are Matucana, Surco, Huariaca, Tarma, Juaja, Cauta, lying 4, 5, 9 to 10,000 feet high, on the west side of the mountain chain, or more in its interior valleys.

There are examples that at 14,000 feet even, in the continuous winter climate, such patients enjoy perfect health. The town of Cerro de Pasco lies about 13,670 feet high, in 11 deg. S. L., its medium temperature is 3 deg. to 4 deg. Reaumur (35 to 40 deg. Fahrenheit), its population varies from 5 to 12,000. At this elevation, the great, absolute dryness of the air may be imagined, snow never falls, and dead animals dry up to mummies. Here the Indian is organized or acclimatized for the high situation, both thorax and lungs are very capacious in proportion to the rarified air which he breathes, and he ascends the steepest slope, laden, quickly and

easily. *Hæmoptysis*, according to our reporter's knowledge, only occurred once and that in a foreigner. On the other hand, *pleurisy* is so common that it causes about one-half the total mortality of the Indians, and the cold and changeable climate yields an abundance of colds.

E. Poppig (*Travels in Chili, Peru, &c.*, 1827, '32), was also in Cerro de Pasco, and speaking of the so-called Puna, the well known mountain asthma, he says that spitting of blood is not at all frequent. These are the statements which we have been able to find in proof of the absence of *Phthisis* in considerable perpendicular height. They are not yet numerous, but they are certainly strengthened by the circumstance that no facts have been met with which afford any evidence to the contrary. It is undoubtedly much to be desired, as well for the etiology as for the therapeutics or hygiene of this disease, that our problem should be solved, and certainly this deficiency in our knowledge could be easily filled by the large towns which lie so high in the Andes.

Our object has been to demonstrate the fact, and I believe that little doubt can remain on the subject. We have had less reference to the *cause* of it. But we can scarcely err if we assert this to reside solely in the rarefied air. We cannot assume general tuberculosis to be absent on high mountains, but we may presume that on account of the rarefied air, with diminished pressure, and an absolute diminution of oxygen, the formation of tubercles, especially in the lungs, which are otherwise their seat of preference, finds no favoring influences, but on the contrary, obstructing influences. This may arise chemically from the diminished supply of oxygen, or it may be simply mechanical, in consequence of the necessarily resulting extension of the act of inspiration with expansion of the chest and bronchiæ. This latter is most plausible. In its favor we have two etiological facts: the formation of the chest of the Indians who live in these high regions is extraordinarily ample, with strongly developed lungs; their limbs are short. This formation loses itself as we descend towards the coast or south. (J. d'Orbigny, *Voyage in South America*.) A further proof is that tubercles are developed in preference, nay almost exclusively in the summit of the lungs, and that just there, in consequence of the conical form of the thorax, least expansion of the pulmonary tissue takes place. We cannot look upon the absolute diminution of the amount of watery vapor in the air as a cause of the absence of *phthisis*; for in Egypt the air is very dry, in East India very moist, and in both countries *phthisis* is rare; in Chili the air is very dry and *phthisis* very frequent.

As to the *use* to be made of those regions which are exempt from pulmonary tuberculosis, as well the lower lying areas, as the higher mountain regions for hygienic purposes, the following conclusions ensue. We must make a great distinction: Whether a *phthisical* subject is only to be placed in a warmer and more equable climate where indeed his affected lungs may be soothed, but where the disease is endemically neither rare nor absent, or whether he should

take up his abode in a climate where the etiological elements of his disease are not endemically present. Whoever has witnessed the good effects which Italy, the South of France and Spain, Madeira, Ischia, &c., exert on phthisical northerners, must expect a still more favorable influence from Egypt, Algeria, East India, and very probably in the higher mountain regions, and above all from the perpetual spring climate of one of the numerous places on the terraces and plateaus of the Andes of Tropical America. But although we cannot regard this last mentioned fact as confirmed, yet it is sufficient to suggest to us that the few elevated inhabited spots of Europe should be more recognized and sought after as residences for consumptives. Such places where a depression of the mercury column amounts to two inches, which consequently are over 1,800 feet high, may lead us to expect an appreciable impression on the respiration, particularly as experience is not wanting to confirm it, and the above facts drawn from distant regions, are, as it were, experiments on a large scale, to ratify it. A rational and easily applied inference is the continued frequent use of deep inspirations in any predisposition to pulmonary tuberculosis.

Vaccination.

The January number of *The Glasgow Medical Journal* contains an analysis of sundry papers on vaccination, (laid before the Board of Health and both Houses of Parliament, by command of her Majesty,) from which the following extracts are taken.—*N. O. Med. and Surg. Jour.*

Fully cognizant of the value of vaccination, and the difficulties which stand in the way of its general adoption by all classes of a community, when it is left to their own free-will and discretion, several of the European states very soon made it obligatory and compulsory. Since 1809, vaccination has been general in the grand duchy of Baden. In 1810, Denmark promulgated a law enforcing it. In 1811, Wurtemberg, Sweden, and Norway, followed in the same track, compelling every child to be vaccinated before the age of two years. Prussia and Bavaria, and several other states, have also experienced the benefit of such legislation, and proved, by the very low mortality from small-pox in these countries, the wisdom and policy of so benevolent a measure. In our free and glorious country, up till 1853, every man could do what was right in his own eyes. To compel one to vaccinate his own children was an infringement on the boasted liberty of the subject; and even then, when vaccination became obligatory, care was taken that there should be no one to enforce the law, and the fine and penalty for its infraction became an empty threat. Accordingly, we find it stated

in the memorial presented in 1855 to the Board of Health, by the Epidemiological Society of London—

“Among them, (diseases preventible by public measures) it will be found that small-pox is still one of the most fatal; destroying on an average in London alone, nearly 1000 persons every year; and in England and Wales, little short of 8000; whilst in particular years of epidemic aggravation, the mortality is still more formidable. And again: While out of 1000 deaths from all causes, there are in England and Wales, 21 from small-pox, and in some parts of Ireland upwards of 50; in Bohemia, Sweden, and some of the Italian states, there are not more than two.”

Further, from Dr. Seaton's notes on the present small-pox mortality of Scotland in 1856, we learn that the deaths from that disease in eight principal towns, constituted 2·8 per cent. of the total mortality, which is double the average of London for the last ten years; or of England and Wales for the last seven. In these towns the proportion in each was very different. In Glasgow, the percentage of deaths from all causes was 1·25; in Leith, 3·2; in Edinburgh, 3·21; in Aberdeen, 3·91; in Paisley, 4·64; while in Dundee it was no less than 9·33. The cause of this high mortality is the neglect of vaccination.

Before the introduction of vaccination, natural small-pox exterminated whole races of men, as in Brazil in 1563. An interesting account is given in the communication from Denmark, of the various epidemics in Iceland, where the last, which occurred in 1707, and was introduced in some wearing apparel belonging to one who had died of that disease on the passage from Denmark, carried off 18,000 out of a population of 50,000. In very recent times, the North American Indians have suffered severely from its ravages; villages being swept away, and none left to bury the dead; whole tribes being almost exterminated. Not less than 60,000 Indians are computed to have been carried off by the epidemic which broke out among them in 1837.

In London, when not at its worst, its mortality averaged a fourteenth of the annual total of deaths. * * * *

Important statistics concerning the protective powers of vaccination have been obtained from foreign governments by the Epidemiological Society of London:

Compare, for instance, in the case of Sweden, the twenty-eight years before vaccination, with the forty years soon afterwards. During the earlier period, there used to die of small-pox, out of each *million* of the Swedish population, 2,050 victims annually; during the later period, out of each million of population, the small-pox deaths have annually averaged 158.

Or compare two periods in Westphalia. During the years 1776–80, the small-pox death-rate was 2,643; during the thirty-five years, 1816–50, it was only 114.

Or taking together the three lines which belong to Bohemia, Mo-

ravia and Austrian Silesia, you find that when formerly (1776-1806) there died 4,000, there now die 200.

Or taking two metropolitan cities. You find that in Copenhagen, for the half century (1751-1800), the small-pox death-rate was 3,128; but for the next half century only 287; and still later, in Berlin, where, for twenty-four years preceding the general use of vaccination, the small-pox death-rate had been 3,422 for forty years, subsequently it has been only 176.

In other words, the fatality of small-pox in Copenhagen is but an eleventh of what it was; in Sweden, a little over a thirteenth; in Berlin and large parts of Austria, but a twentieth; in Westphalia, but a twenty-fifth.

From such information as exists, it seems probable that the small-pox death-rate of London within the bills of mortality, during the eighteenth century, ranged from 3,000 to 5,000. During the ten years (1846-55), it was under 340.

According to Mr. Marson, the fatality of small-pox, when it attacks the unvaccinated, is 350 per thousand; that its fatality to such vaccinated persons as it infects, is, taking them indiscriminately, 70 per thousand; but distinguishing vaccinated persons into two classes—those (1) who have been vaccinated in the best known manner, and those (2) who have been badly vaccinated—the fatality of small-pox, if it infects the former, will be 5 per thousand; if it infects the latter, 150 per thousand; that the risk of the one will be thirty times the risk of the other.

Post-Vaccinal Small-Pox.—Two causes have been assigned as the reason of this re-susceptibility; either (1) that the protection afforded us wears out and loses its influence in the course of time, or (2) that the vaccine matter has degenerated in the course of transmission from man to man. To obviate this first cause, re-vaccination was proposed as a preventive of this re-susceptibility to small-pox. The first and earliest experiments on the large scale were performed in the army of Wirtemberg. From 1831½-5½, 14,384, chiefly between 20 and 30 years of age, were re-vaccinated; and of these 340.2 per 1,000 were perfectly susceptible; the same kind of vesicle was produced which would have appeared had the operation been performed for the first time. Of 7,845 who had presented normal cicatrices of vaccination, the operation was successful in 310.4 per thousand; “modified” in 280.5 per thousand, and “failed” in 409.2 per thousand; of 3,545 with defective cicatrices, re-vaccination was perfect in 280.7 per thousand, modified in 259, and failed in 460.4; of 2,503 with no cicatrices, it was successful in 337.3 per thousand, modified in 191.1, and failed in 471.6; of 266 who had marks of small-pox, it was perfect in 319.5 per thousand, modified in 248.1, and failed in 432.3.

The National Vaccine Board, in their report for 1854, state that:

“The vaccine lymph does not lose any of its prophylactic power by a continued transit through successive subjects, and that it is a

fallacy to predicate the necessity of resorting to the original source of the cow for a renewed supply."

The contrary opinion is maintained by several eminent men, as well in Europe as in Britain, that the vaccine lymph does inevitably become deteriorated ; while others believe that this is only a contingent danger.

In 1818, M. Brisset alleged that there was a marked difference in the character of the vaccine vesicle ; and in 1824 Dr. Meyer, of Kreutzburg, stated that out of 4,000 cases, the older scars of vaccination were better marked than recent ones, and that those produced by regenerated lymph exhibited the marks of the older normal type. From the experiments instituted by M. Bousquet, Prof. Hering, Mr. Estlin, M. Fiard, and Dr. Steinbrenner, Mr. Simon thinks it " proved beyond the possibility of a reasonable doubt, that certain original properties of the vaccine contagion have very generally declined after its long successive descent from the cow ;" and " that the infective power of the newly humanized lymph is greater, and produces a more certain change ;" and that " lymph of short descent has been more successful in disinfecting the body of that ingredient which constitutes its susceptibility to small-pox." This successive deterioration in vaccine lymph is well brought out by the reports of re-vaccination in the Prussian army. These extend back twenty-four years ; and as from 40,000 to 45,000 operations are performed annually, they present a total of nearly a million experiments :

"When, in 1833, this system of re-vaccination commenced, the proportion of successful results (including cases in which the success came only with a second attempt), was 33 in every 100 vaccinations. Now the annual per centages of successful results for the whole time during which re-vaccination has been practised in the Prussian army beginning with that number, run thus :—33, 39, 42, 46, 49, 50, 51, 54, 57, 58, 57, 57, 58, 60, 64, 64, 64, 61, 64, 69, 69, 69, 70. *The last proportion of success exceeds the double of that with which the series commenced.* Thirty-three per cent. expresses the proportion in which persons vaccinated, say twenty years previously, had, in 1833, to a certain extent lost the influence of their infantine vaccination : it measures the impermanence of certain impressions produced by the vaccinations of 1813. And that impermanence (such as it was) in the effects of vaccination, has increased almost without exception, year by year, during this quarter of a century ; so that the vaccinations of 1836—tested by eventual re-susceptibility to cow-pox—were not half so stable as the vaccinations of 1813."

What evils have been shown to attend its practice and to counterbalance its alleged advantages ?

M. Carnot's notion was, that vaccination had given us typhoid fever and scrofula, in substitution for small-pox. But vaccination has no more to do with these diseases than with any other casualty

which may befall human life. * * * Vaccine lymph, taken from patients with small-pox, conveys only the vaccine infection, pure and isolated. In like manner, it has been shown that scrofula and cutaneous eruptions are incommunicable. The experiments of Professor Sigmünd and Dr. Friedinger have proved that "syphilis, in its innocible form, prevents within the sphere of its infection, the simultaneous formation of a vaccine vesicle;" in other words, the discharge of chancre, mixed with vaccine lymph, produces only syphilitic infection.

To elucidate this subject more fully, a circular letter was addressed to members of the medical profession, the departments of the public service, and to foreign governments. Replies to four questions, vitally affecting our future legislation on this subject, were requested. Five hundred and thirty-nine members of the profession, men of high repute and standing in this country, and on the Continent, responded to the invitation. From Austria we have the opinion—1. Of the Imperial Society of Surgeons at Vienna; 2. The Faculty of Medicine at Prague; 3. The Imperial General Hospital of Vienna; 4. The Imperial Lying-in and Foundling Hospital. Baden, Bavaria, Denmark, and the Duchies of Holstein and Lauenburg, have favored us with their experience. Equally satisfactory answers have been forwarded from the governments of France, Portugal, Prussia, Sweden, Norway, and Wirtemberg. The valuable mass of information contained in these replies is published at length in Appendix J and K. We will examine them seriatim.

1. The first question was—"Have you any doubt that successful vaccination confers on persons subject to its influence a very large exemption from attacks of small-pox, and almost absolute security against death by that disease?" Throughout the whole series of 539 respondents, there are but two whose opinion is negative. No. 508 "distrusts vaccination, and would gladly inoculate his own children with small-pox." No. 219 "regards both proceedings with equal disfavor, and considers them alike to be at best but harmless, trifling. All the governments who enforce vaccination by legislation, of course, answer affirmatively.

2. "Have you any reason to believe or suspect that vaccinated persons, in being rendered less susceptible of small-pox, become more susceptible of any other infective disease, or of phthisis; or that their health is in any other way disadvantageously affected?" All the replying governments who have made vaccination compulsory have discovered no drawbacks to its advantage; while of the 539 respondents, not one has seen anything to excite such suspicion.

3. "Have you any reason to believe or suspect that lymph from a true Jennerian vesicle has ever been a vehicle of syphilitic, scrofulous, or other constitutional infection, to the vaccinated person; or that unintentional inoculation with some other disease, instead of the proposed vaccination, has occurred in the hands of a duly educated medical practitioner?" In reply to the third question, by far the large majority, all men of talent, skill and experience in their profession, never had any reason to believe or suspect that lymph

from a true Jennerian vesicle, ever produced, or conveyed to another person, syphilitic, scrofulous, or other infection. With regard to the exception, only two have reason to believe, or think it probable, that lymph taken from a party with hereditary disease, conveys that disease with it. Two have seen several instances of the transference of the syphilitic taint, the lymph being taken from a supposed true vesicle in a tainted infant; while other two have seen cases of syphilitic disease following vaccination. (This last, however, is no reply to the question.) Another has suspicion of having seen a case. Three others are convinced, believe, and have no doubt of such conveyance being possible; while Professor Alison has known such affections to have been apparently communicated by attempted vaccination, or by any other incision of the skin; but such cases are not to be regarded as instances of vaccination. Mr. Acton unhesitatingly affirms, that he never witnessed a single case of syphilitic infection, communicated in this manner, and points out *the fallacies* that might lead to such a supposition. Dr. Hebra, head of the small-pox division of the General Hospital, Vienna, and Professor on Diseases of the Skin, considers it proved, that by the experiments of Heim, Ricord, Taupin, Friedinger, etc.; that both poisons are not simultaneously transmissible; while Mr. Paget can find no support for the suspicion, that the lymph of a well-formed vaccine vesicle can convey any other disease. With these opinions, that of the Imperial Society of Surgeons of Vienna coincides, experiment having proved that vaccine lymph taken from syphilitic subjects, and used upon healthy persons, and *vice versa*, did not convey syphilis with the cow-pox.

With regard to the occurrence of cutaneous eruptions, out of 15 who have seen or known of such eruptions—vesicular, pustular, or erysipelatous—following vaccination, three have seen lymph from unhealthy subjects produce it; one has seen them occur in weakly children; two have seen them produced by healthy lymph, while the same lymph did not do so in other children. Hence one considers the constitution probably predisposed in such, while another considers such eruptions as sequelæ of no consequence; and several see no connection between them and vaccination.

4. "Do you (assuming due provisions to exist for a skillful performance of the operation) recommend that, except for special reasons in individual cases, vaccination should universally be performed at early periods of life?"

The importance of early vaccination is well shown by the tables published under the authority of the Registrar-General. "Twenty-five per cent. of the whole mortality of small-pox in England and Wales happens in infants less than one year old; and as much as eleven per cent. within the age of four months. Within the fifth year the proportion reaches the enormous amount of from seventy-five to eighty per cent."

Mr. Marson's tables show that the mortality "under five years is fifty per cent.; still greater, however, under two years; after twenty

years it rises suddenly, and increases gradually ; at thirty it exceeds the mortality of infancy ; and after sixty hardly any escape."

Hence all the replying governments and all the respondents, with the exception of the "par nobile fratrum" (mentioned under question 1), recommend early vaccination unanimously.

Influence of Manufactories of Chemicals on Vegetation and Public Hygiene. From the Journal de Chemie.

A commission was appointed by the Belgian government, August 30, 1854, to investigate the effects of certain manufactories of chemicals on the operatives employed, as well as on the vegetation in the neighborhood. This commission was divided into two sub-committees, in order to hasten, as much as possible, the solution of the numerous questions that were involved. One of these, composed of two chemists, was specially charged with the duty of visiting the shops, the minute examination of the apparatus employed, and the study of means suitable for lessening the effect of acid emanations ; the other, formed of botanists and agriculturists, directed its attention to the condition of vegetation in fields and forests adjoining manufactories. These sub-committees have furnished a report which is of general interest.

The committee of chemists, in order to make an exact account of the influence of each process, made analyses of the different products, at various stages in the process of manufacture, and often analyzed the materials first employed. A thorough study was made of the nature and quantity of gases escaping from the chimneys of the manufactories, which have been considered as most potent causes of unhealthiness of the neighborhoods. Their work was confined exclusively to establishments in which sulphuric acid, nitric acid, sulphate of soda, chlorhydric acid, soda, chloride of lime, and copperas, (sulphate of iron,) were made. Such of their results as possess especial interest, have been selected for our pages.

Manufactories of Sulphuric Acid.—The manufacture of sulphuric acid, despite the perfections which science has endeavored to introduce, can rightly be placed among those of an unhealthy character. The inconveniences which arise from its manufacture depend principally on the difficulty of completely condensing the gases, which, by their reaction in the leaden chambers, give rise to the sulphuric acid. Among these gases are two which, in consequence of the manner the process is carried on, can escape from the chambers—sulphurous acid and hyponitric acid—both irrespirable, and especially injurious to vegetation. It was interesting, then, to examine what was the influence exercised by these gases in the manufac-

tories where they were produced. It was first necessary to determine their real presence and proportion in the emanation from the manufactories. The commission made this determination from two different methods—from data furnished them by the workmen employed in the manufactories, and by direct analysis. It will be understood that, if we sum up on the one hand the quantity of sulphuric acid annually made in a manufactory, and on the other hand the quantity of sulphur burned in the same establishment, we can, by subtracting from the latter the amount which exists in the sulphuric acid, obtain the quantity of sulphur burned which has *not* been condensed as sulphuric acid, and which would be communicated to the atmosphere as *sulphurous acid*. There is, however, (and this circumstance has not been overlooked by the commission) a source of error in this method of calculation, which rests upon the fact that a portion of sulphur, very small generally, may escape as sulphuric acid. The commission, therefore, considered it necessary to analyze the gases directly at their escape from the chambers, and thus found the results obtained in this way slightly different from the first results.

But here a difficulty occurred, the extent of which chemists will appreciate. The commission was only able, at these places—that is, the opening of the chimneys—to make qualitative examinations for the determination of the true nature of these gases; their quantity had to be determined in the laboratory in specimens transported thither in flasks. Thus they determined readily the presence of nitrous compounds at the opening of the chimney, which they could never detect in the gaseous mixture analyzed in the laboratory, in consequence, doubtless, of the formation of a small quantity of sulphuric acid. This circumstance detracts somewhat from the interest of the results of the commission, in that it only furnished the absolute per centage approximately of the sulphurous acid. The result of the examination of the gases escaping from the chimney was the determination of an average per centage daily, of Sulphurous Acid 0.955, Oxygen 14.961, and Nitrogen 84.08. For an average manufacture of 1,381,609 kilogrammes of sulphuric acid produced, there was a daily loss of 225 cubic metres of sulphurous acid gas.

Manufacture of Soda.—The inconveniences arising from the manufacture of this article, are greater than in the case of sulphuric acid, since the difficulty is greater of condensing the gases at their exit from the chimney. The smoke from the latter usually contains the products of the combustion of pit-coal, a notable quantity of sulphuric acid, and a much larger quantity of chlorhydric acid. In four manufactories there was an average daily loss of 613 cubic metres of chlorhydric acid. The amount varies with the method of condensation employed by the manufacturer. The commission state that high chimneys ensure the removal of noxious emanations, which, although diluted with large quantities of air, *still* descend to the ground, and in wet weather this takes place very rapidly, so that such chimneys only ensure a greater radius for the deleterious

emanations. They advise that the government should not suffer high chimneys to be erected, unless they were supplied with apparatus for condensation.

The second part of the report of the commission consists of an examination of *the alterations in vegetation produced by these emanations*. In a general way, attention was paid to their action, according to the direction of the winds, the humidity of the atmosphere, rains, the topographic configuration of the soil with its reliefs; and they concluded, as would have been easily predicted, that, other things being equal, the effects were more sensible, in the most usual direction of the wind, under the influence of foggy weather, or rain, and when the smoke, either from the disposition of the surface or the direction of the wind, was brought into close contact with the surface. And wherever the effect produced by the smoke was manifest, it was possible to demonstrate by re-agents the presence of the chemical agents to which it was due. These were ordinarily chlorhydric or sulphuric acids. On the other hand, it was not possible to detect the presence of these acids on vegetation of the same species, when *no* signs of alteration were noticed.

But dare we conclude from these observations that no effect, in fact, is produced, except where it is possible to determine the presence of a chemical agent? The commission have not gone as far as to insist on that. They have, however, given us the relative sensibility to the influence of these acids, of a number of plants. This number comprises thirty-four trees and shrubs. The most sensitive of all was the hornbeam, (*Carpinus Betulus*,) and the least so, the raspberry, the spireas, and the alder.

The conclusions of the commission are summed up as follows:

- 1st. Acid emanations, which escape from the manufactories of chemicals, are capable of injuring the growth of certain plants;
- 2d. Nevertheless, the effects are produced in such an unequal way upon different kinds of ligneous and herbaceous plants, as that certain species appear to resist the harmful influence of the acid gases very well, while others are injured by the same, but to various extents;
- 3d. Among the last some cease to show any sign of alteration, even at a slight distance from the manufactories, whilst the alteration of others is effected at great distances, but always within certain limits;
- 4th. The radius of the injurious influence of such acid gases depends on several circumstances essentially different, but which cannot be absolutely determined; although in each given case, they can be determined practically by observing at what distance vegetables which are readily injured by the emanation, cease to present such special alterations as could be ascribed to their action;
- 5th. The radius of injurious influence, determined in this way, differs very much, not only in different establishments, but even in different directions from the same; and it was always greater in the direction of the dominant winds, whilst in the directions of winds less frequent it was always small and inconsiderable;
- 6th. In the direction of the dominant winds, the influence did

not extend beyond 2,000 metres as a maximum, nor below 600 metres as a minimum.

Influence of such Manufactories on Population.—From the data collected by the government for 5 years, with reference to births and deaths, it appears that the means were favorable to the increase of population, as well in the districts where the manufactories were established, as in those adjoining. Thus, from 1839 to 1843, the ratio of deaths was one in 66, and from 1844 to 1848, 1 in 58. It is remarkable that no case of cholera had appeared in these manufacturing districts, and that, with the exception of Floreffe, all were exempted from the typhoid epidemics which have prevailed in the province since 1843. During the epidemic of Floreffe, which raged in the hamlet of Buzet, where there were 75 sick, only one of the laborers who worked in a chemical manufactory was attacked by the disease, and he had taken a long journey two days before.

A report of Dr. Cambrelin, president of the Medical Commission of the Province of Namur, states that the emanations from the chemical manufactories of the valley of the Sambre, do not give rise to any peculiar affection, and that the diseases of the chest are not now as frequent as formerly in the districts where the manufactories exist. The general health of the neighboring population remains the same as in the past—even that of the laborers occupied in the manufactories; and if they are ever attacked at the beginning of their apprenticeship with laryngitis, bronchitis, or difficulty in respiration, custom soon causes these indispositions to disappear, without any recurrence. The same observations are made as to the horses employed in the establishments.

Thus, contrary to expectation, the ratio of mortality is diminished in the midst of these manufactories of chemicals; but should this diminution be attributed to the direct influence which these manufactories have on the health of the workmen and the population? No one would dare to assert this. These manufactories have contributed, in one sense, to this happy result, by extending comfort around them, and offering regular employment, with suitable wages, to a portion of the population. In any point of view, and whatever part we may wish to ascribe to them in the way of direct influence, none of the facts will authorize us to conclude that these manufactories have exercised an *injurious* influence on health, and that they are not a cause of prosperity for the countries in which they have been established.—L. H. S.—*Amer. Med. Monthly.*

The Influence of Light on Animals. Translated from a paper by Mons. T. Beclard.

During the last four years we have been performing in the laboratory of the Faculty of Medicine, a series of experiments relating to the influence of ordinary white light, and of the different colored rays of the spectrum on the principal functions of nutrition. The

object of this article is to present, by anticipation and in a concise form some of the most important results of these experiments.

I. The nutrition and developement of animals not possessed of lungs or bronchia, who respire through the skin, appear to suffer very remarkable modifications under the influence of different colored rays of the spectrum. The eggs of the *musca carnaria*, taken in the same group and placed at the same time under bell-glasses of different colors, give forth maggots; but if, at the end of four or five days, the maggots under the bell-glasses, be compared, their developement will be found to differ very much. Those more fully developed will be found under the violet or blue, and those least developed, under the green. The different colored rays can be grouped, as regards their action on the development of maggots, thus: violet, blue, red, yellow, white, green. Between the development of those under the violet, and those under the green ray, there was a difference of one-third in general size and length.

II. This first result induced us to examine the function which explains best, if I may so say, the quantity of organic metamorphoses—I mean the respiration, whose products can be received and estimated.

A long series of experiments upon birds, has shown us that the quantity of carbonic acid produced in a given time, through respiration, is not sensibly modified by the different colored bell-glasses under which they had been placed. The same was the result with the lower mammalia, as mice. We must, however, remark that the skin in birds and mammalia, is covered with feathers and hairs, and that the light does not strike its surface. But we know, from the researches of Regnault and Reizet, that the change of gases (endosmose, &c.,) which takes place at the surface of these animals, is very slight.

III. When we examine the influence of the different colored rays of the spectrum on frogs, who have a naked skin, and whose cutaneous respiration is energetic, (it equals, and often surpasses, the pulmonary respiration,) we can obtain remarkable facts. Our experiments here were only made with the green and the red ray. In the green ray the same weight of frogs produced, in the same time, a larger quantity of carbonic acid than in the red ray. The difference may be more than a half, generally a third, or a quarter more.

IV. The skin of the animal (very likely the color of the skin) appeared to have a determining influence on the preceding results. For example, if a certain number of frogs were placed under a green glass, and a like number of the same weight were placed under a red glass, and the quantity of carbonic acid produced, weighed at the end of 24 or 48 hours, the excess was in favor of the frogs placed under the green glass, as we have just mentioned. Immediately take the skins off the frogs, and replace them in the same conditions, the experiment will change; the quantity of acid produced by the skinned frogs, will be larger in the red ray than in the green.

V. The influence of the colored rays of the spectrum upon the proportion of carbonic acid exhaled, in a given time, by a living animal, continues for some time with the dead animal, (muscular respiration,) and ceases as soon as putrefaction begins—that is to say, after the disappearance of cadaveric rigidity. Butchers' meat, taken on the day following the death of the animal, or the next day, (then the cadaveric rigidity has ceased,) furnishes always, for an equal number of pounds, the same quantity of carbonic acid when its fragments are placed under the different colored rays.

VI. A small number of experiments tried on the cutaneous exhalation of aqueous vapor, show that in the dark, (at the same temperature,) frogs lose through evaporation, an amount of water one-half or one-third less than when exposed to ordinary white light. In the violet ray, the quantity of water lost by the animal in a given time, is precisely the same as in white light.—L. H. S.—*Amer. Med. Monthly.*

On Matters of Novelty or General Interest, as at present exhibited in the Practice of the Hospitals of Paris. By GEO. SUCKLEY, M.D., late Assistant Surgeon, U. S. Army.

The Parisian journals of medicine, like those of all other countries, are constantly filled with new projects and methods of treating disease, which, although backed up by successful statistics, real or apparent, and the publication of isolated cases, merely live their day, and are shortly after forgotten.

I do not, therefore, purpose to take up all the novelties in medical treatment which have been advocated during the past winter, but merely to glance at a few of the leading matters that have lately caused more or less sensation in the medical world of Paris. Without classifying directly, into two groups, the double subject contained in the title of this article, I shall treat of the "matters of general interest" whenever their introduction is naturally induced by their connection with the novelties.

Foremost among the new things of the day, is the revival of Laennec's antimonial treatment of chorea. The novelty of the renewal consists in the exaggeration of the plan, and the heroic doses administered. To Mons. Gillette, of the Hôpital des Enfants Malades, is due the credit of the renewal of the antimonial treatment, which is now pursued as follows, for children say eight years of age :

The first day 20 centigrammes* of antim. tart. is given ; on the second, 25 ; on the third day, 30. These quantities are dissolved in about three ounces of gum-water, and commence to be given to the patient, fasting, at an early hour of the morning, at the rate of a tablespoonful an hour, until it is all taken. During the adminis-

* 100 centigrammes make a gramme, which is a fraction over 15 grains.

tration of the doses no solid food is allowed, but the patient may take a little clear broth; the patient is also kept on his back while taking the medicine, but in the afternoons is allowed to get up and eat the usual hospital diet. If this course has not been sufficient, you will wait for the space of four days before recommencing the treatment, giving them 40 centigrammes (about 7 grains) of the remedy, in the same way, on the first day, and increasing the dose 5 centigrammes (nearly 1 grain), for each of the two succeeding days, observing the same regulations as before. If this does not cure, again wait four or five days, and then commence with 55 centigrammes, augmenting the quantity daily, as before, and following the same rules. If the drug operates too much on the intestines, add a little laudanum to the solution. If these trials do not effect a cure, or cause radical amelioration, the treatment by tartar emetic should be abandoned. (NOTE.—The foregoing statement of the doses, etc., I have got from Dr. Miller, who has carefully watched the practice of the Hôpital des Enfants Malades. Dr. M. says that the children with this disease *generally* tolerate these large doses very well.)

Blache, at the Hôpital des Enfants Malades, until recently, relied upon the shampooing process in treating children for chorea. When employing this latter method the average time of cure was twenty-five days. Blache now has, to a certain extent, abandoned the shampooing treatment for the antimonial; but not entirely, as a very obstinate case has lately resisted the complete exhibition of the antimonial treatment, in which he has been obliged to return to the shampooing process. This is nothing more than an addition to the mountain of proof that we cannot obtain *specifics* in medicine.

Becquerel does not seem to think much of the foregoing plan, as shortly after it had been publicly proposed, I saw a case of severe acute chorea in his wards, which he treated in the common sense way by following the indications. The case was that of a young girl who, through cold, had a sudden suppression of the menses. Choreia manifested itself immediately, in a most aggravated form. In addition to the shower-bath and cold douche, which are his "sheet anchors" in this complaint, in the view of the obvious cause of the malady, a vicarious flow was induced by leeches, a large number of which were applied. I saw the patient a few days after, when she was rapidly recovering.

Trousseau's favorite method of treating chorea is by the administration of the sulphate of strychnine, in the following manner:

℞ Sulph. strychniæ, centigrammes 5.	} Cap. coch. mag. ter.
Syrup. simpl., grammes 100. Misce.	
	} in die.

Dr. Nathaniel Miller, of Providence, Rhode Island, now in Paris, informs me that he has seen a case of aggravated chorea, which had completely resisted Trousseau's treatment—carried on until the peculiar poisonous effects of strychnine had become dangerously manifested, rapidly cured by the antimonial treatment.

Mons. Briquet has lately advocated the *electric treatment for lead*

cholic. He has demonstrated, very conclusively, that the seat of the disease is in the muscular parietes of the abdomen, and not in the intestine. By this treatment the pain ceases after every application of the agent, leaving the patient comfortable for an hour or longer. In the meanwhile, the ordinary treatment, for the elimination of the lead, can be employed. During the application of the electricity, the pains are greatly increased, but soon subside. Becquerel does not adopt the plan, but relies on the usual treatment by sulphuric acid and evacuates.

In Becquerel's service there have not been lately any cases of extraordinary interest, with perhaps the exceptional instance of a patient having a patch of "bronze skin" upon the forehead. Upon examination after death (from another complaint) the supra-renal capsule of the right side was found enlarged and carcinomatous, thus, to a certain extent, verifying a theory on the subject.

In testing urine for albumen, Becquerel prefers the pyro-phosphoric acid when a delicate test is required, this agent showing the presence of albumen, even when in as low proportion as one in ten thousand parts of urine. The pyro-phosphoric acid should be used within two hours after it is made, as, later than that, it takes up two other equivalents of water, and becomes ordinary phosphoric acid.

A writer in the *Gazette des Hôpitaux* of December 15, 1857, giving the results of the so-called "purgative treatment" in the typhoid fever of children, as shown by the practice of M. Beau, makes use of the following strong language in opening his subject: "The purgative method, indubitably the best for the adult," (!) "should it be used in typhoid fever of infants (children)?" If the purgative method* is "indubitably the best for the adult" suffering from this disease (a theory which I think very few American physicians will admit), it is not relied upon by Becquerel, who prescribes but little for this disorder except good nursing; although, in rare cases, where there are severe local complications, he occasionally bleeds a little. Bouillaud, at the Charité, treats nearly all cases of this disease by bleeding.

The employment of mercury, in the Parisian hospitals, is almost entirely confined to its use as a cathartic, in which case very small doses of calomel are given, mixed usually in powdered white sugar. Except in the treatment of specific venereal diseases, the administration of mercury, to obtain its specific alterative effect, is almost entirely confined, in the hospitals of Paris, to the treatment of puerperal peritonitis and congestion of the liver.

A singular fact, noticed in the Parisian hospitals by a stranger, is that no means are attempted to isolate cases of the contagious eruptive fevers; these being placed indiscriminately throughout the wards. From what I can learn, these disorders are rarely commu-

* The "purgative method" of Larroque is the one employed. It consists in the administration of an antimonial emetic at first; which is followed afterwards by salts, repeated continually for three or four weeks, in sufficient quantities to produce four or five evacuations daily !!

nicated to the other patients ; and as they are now considered very tractable, but little heed is given to them.

Several points in the general treatment in these hospitals are well worth noticing. Foremost is the prevalence of the "let alone treatment," unless there is a strong indication to the contrary. This seems to be particularly the case with Becquerel. In his service, also, whenever a patient is bled, the blood is analyzed ; if more than the normal quantity of fibrine is found, the bleeding is repeated, and again, and again, if the superabundance of fibrine continues.

A short time ago, I witnessed Becquerel apply the actual cautery to several cases of ulcerations of the os uteri. The agency of the electrical cautery apparatus was employed ; and I noticed that he took pains to connect the wires, and heat the metal of the cautery, *outside* of the vagina.

At first, when using the electrical cautery, he was in the habit of heating the iron near to, or directly upon the surface to which he was to apply it ; but finding that even in the comparatively short time he had been thus using the agent, that two cases of metro-peritonitis had occurred, he deemed it best to employ the iron already made hot before the introduction into the vagina, in the same manner precisely that the common actual cautery is used.* The same physician, in ordinary vaginal examinations, makes use of the *tri-valve* speculum by preference.

In surgery I have seen but little new since writing my former article. In that paper I mentioned Maisonneuve's method of amputating with the *écraseur*, and stated that the object sought by this mode is to lessen the danger of phlebitis and "purulent absorption." Judging from the success following the removal of hemorrhoidal tumors, etc., by this instrument, and the comparative infrequency of phlebitis as a consequence, it was but fair to suppose that, in hospitals where all operations with the knife had been unsuccessful from that very cause, there must be something more than mere accident to occasion such a manifest difference where the *écraseur* is used. Thus far, Maisonneuve has amputated ten times in this manner, as follows :—2 arms, 2 forearms, 1 thigh, and 5 legs. Of this number there have been two deaths ; but on a severely exact post-mortem examination, no traces of purulent absorption or phlebitis could be detected.

The case of amputation of the thigh formed one of the two fatal cases. It is a pity that, in view of the experiment instituted, there was not a larger proportion of amputations of the *thigh*, for comparison and examination.

*A single case of metro-peritonitis had also occurred in a vast number of instances in which the common cautery had been used. Whether this was the *only* case that has occurred in Becquerel's wards, or the only case which has occurred during my informant's connection in Becquerel's service, I do not now remember.

Since the means used at first for breaking the bones have been improved and altered, and brought to their present perfection, the stumps following the operation are very good.

The case of injection of iodine into the knee-joint, for the cure of chronic synovitis, reported by me heretofore, was considered *cured* twenty-eight days after the operation. Several similar operations have been performed in the different hospitals within the past two months; and I have heard of one case in which both knees were injected.

Chassaingnac has recently amputated the neck of the os uteri with the *écraseur*. I witnessed two of these operations, which were readily performed, and accompanied by very little hemorrhage, perhaps not more than two teaspoonsful each. The ultimate results of these cases I have not yet ascertained.

In connection with the above subject, is the fact here stated, that not a single case of "Cæsarian section" has ever been performed in Paris, without sacrificing *the mother*.

The treatment of fractures is so faulty in Paris, that to do the subject justice, it would require more space and time than can be at present spared. For some years past all attempts to apply the extension treatment to a fractured thigh, have been abandoned, for the reason that all the methods known to the French surgeons were liable, if extension be kept up, to be followed with sloughs of the ankle, instep, etc. The plan of making extension by adhesive plaster bands, and the "straight apparatus," until March, 1858, had not reached the "focus of medical knowledge," although it has been in successful practice for over seven years in the United States.

The treatment usually employed here for *ununited* fractures, is by the seton. Occasionally, however, cures have been effected by dissecting the ends of the fractured bones, and then dissecting up for a short distance, the periosteum from each fragment, and invaginating, as it were, the portions of the membrane towards each other.

Maisonneuve has now under treatment a case of recent fracture of the patella, which he is treating by a method original with him. He applies bands of adhesive plaster above and below the patella, in the form of a double "figure 8," encasing the whole limb afterwards in a stiff support of adhesive plaster, put on like ordinary "straps," but wider than those we use for strapping ulcers. The effect of this casing is much like that of the ordinary starched bandage, and, I think, scarcely more efficacious. The *whole* plan of the treatment strikes me as good, and I shall not be surprised if its results are favorable, and at least one step beyond the usual modes hitherto in use.

In Ricord's hospital, Hôpital du Midi, there are at present the usual number of afflicted. I learn, from the chief de clinique, M. Poisson, that since the last edition of Ricord's letters, a point has arisen to notice, which somewhat staggers the previous theories of that eminent specialist, concerning the convertibility or non-convertibility, of his two divisions of chancres; this is the fact, that chancres on the "face" (lips)? are *almost always* of the *hard* variety.

To settle this point, a vast number of experiments would have to be instituted, which are precluded by the cruelty of submitting the subjects to such a risk, as well as the great danger of legal processes afterwards.

Ricord's treatment for indolent non-suppurating scrofulous buboes of the groin, is to touch the surface in points all over the enlarged gland, with a red-hot iron—each point burnt being of about the size of a pea.

This is the same manner in which Maisonneuve uses the actual cautery for treating chronic strumous inflammation of the knee. He then applies pressure by means of a narrow india-rubber "roller bandage" neatly applied.

The latter surgeon, a short time ago, reduced a very large scrotal hernia by applying a similar bandage of india rubber.

At present it is quite the fashion with the surgeons here to operate on fingers and toes which have had local anæsthesia produced by the freezing mixture. This is not new in the United States; but, perhaps, the hint thrown out by the Parisian experience, that the soft parts are very apt to suffer afterwards, if the cold is applied for a period exceeding three minutes may be of use to some.

Some time ago, Nélaton reduced a dislocated shoulder by means of the ordinary pulleys, working on a sort of spring steel-yard, called, I think, a "dynamometer." This, on its dial-face, gave the exact amount of force employed. An ingenious instrument for suddenly letting go the rope, thus saving it from being cut, as in the ordinary manner, was also used. The working of both instruments was quite satisfactory.

Jobert de Lamballe, at the Hôtel Dieu, has operated this winter on a case of the so-called "loose cartilage" of the knee-joint. His operation was neat and successful to a degree. From a report of the case, as found in the *Gazette des Hôpitaux*, and as furnished me by Dr. Webster Lindsly, of Washington City, D. C., who watched the case while under treatment, I am enabled to give the following condensed summary of its leading features:

Operation for the extraction of a movable foreign body in the cavity of the knee-joint by Jobert (de Lamballe) at the Hôtel Dieu.—On the 18th of November last, Jobert attempted to dissipate a "movable cartilage," which had previously been ascertained to be lying loose in the cavity of the knee-joint. His first operation was intended to effect the object by the "bruising" method. Owing to the hardness of the body, this operation was unsuccessful.

Several days afterwards, when all the commotion produced by the attempt had disappeared, the operation for the complete removal of the foreign substance was commenced, by puncturing the integuments at a point about $1\frac{1}{2}$ inches above the outer side of the movable body. A very thin, sharp tenotomy knife was introduced into the wound thus made, and the instrument conducted subcutaneously to a point opposite the foreign body. The operator, then, by dexterously handling his knife, made a small concealed cavity, or re-

ceptacle, sufficiently large to allow the offending mass to be pushed into it. The cartilage being then pushed into this cell, the operation was stopped, and the wound closed by adhesive straps. The joint was kept in absolute quiet, and the usual antiphlogistic treatment adopted. Although, for some time thereafter, there was more or less of inflammation, pains, etc., in the joint, at the end of twenty-five days they had disappeared, and the patient was found in a completely satisfactory condition. Jobert then performed the second part of his operation, which consisted simply in cutting down upon the body, and removing it with forceps. The wound was then closed by two needle sutures. With ordinary care and treatment the patient rapidly recovered, notwithstanding a slight erysipelatous blush which showed itself on the third day. The foreign body was the size of an almond, ovoid in shape, and flattened on two of its sides.

The principal interesting feature of this case, and which tended so directly to its happy result, was the length of time which was allowed to elapse between the sequestrian of the "movable body" and the period of its ultimate extraction. Jobert insists that the period of repose between the two steps of the operation, should be at least from twenty-five to thirty days.

The "*Annales d'hygiène publique et de médecine légale*" of January, 1858, contains a paper by Mons. Ambroise Tardieu, Physician to the Lariboisière Hospital, on the medico-legal bearings of the crime of "*pèdèrastie*." His work contains a record of the alarming and frightful extent of this crime in Paris, as developed by the examinations of 205 individuals either actively or passively addicted to the vice, together with remarks upon its effects upon the health—its diagnostic signs, and its bearing as a contingent of other crimes.

Dr. Tardieu is the chief medical examiner to the police, in cases where expert testimony is required concerning rapes, etc., and is also a man of sufficient standing in his profession to have been appointed visiting physician to the most new and beautiful hospital in Paris. The disgusting details through which he had to wade in making this report, have been manfully met. Actuated by devotion to science, and a sense of duty, he has written a paper singular in the extreme, upon a crime happily almost unknown in America. I have mentioned the existence of this report, for the benefit of those pursuing medico-legal studies, and in the words of the reviewer of the work, my excuse is—"La science est comme le feu, elle purifie tout ce qu'elle touche."

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

Medical and Physiological Commentaries. By MARTIN PAINE, M. D., A. M. In two volumes, 1840. New York: Collins, Keese & Co.

We have just received a copy of this work, as we suppose, from the Author. It will be noticed that it bears date 1840, a circumstance that may be invoked to explain some of the Author's views, doctrines, etc.

Vol. 1st is divided into three parts—

1st. *Vital Powers.*

2. *Philosophy of the operation of loss of Blood.*

3d. *The Humoral Pathology.*

Vol. 2 is divided into six parts:

1. *Philosophy of Animal Heat.*

2. *Philosophy of Digestion.*

3. *Theories of Inflammation.*

4. *Philosophy of Venous Congestion.*

5. *Comparative Merits of the Hippocratic and Anatomical Schools.*

6. *On the Principal Writings of P. Ch. A. Louis, M. D.*

There is an Appendix to the first volume on Scurvy and Diabetes; on Endosmose and Exosmose; on Fasting in relation to Humoralism; on the Microscope; a Supplement to the Vital Powers; Supplement to the Humoral Pathology.

In most works that make their appearance in these times, something, more or less, may be noticed that shows an advance on former knowledge; and that is also suggestive in regard to what may reasonably be expected from a cultivation of the special department that has engaged the attention of the Author. An Author, indeed, may entirely fail in getting any thing new out of a subject that has engaged his attention for years, and upon which he has even imagined himself sufficiently familiar to write a book; but still he may make suggestions that will lead others to more fortunate results. We wish we could assert even the latter with reference to the author before us.

In the two volumes he has brought to the attention of the reader quite a variety of subjects—Medical and Physiological,—and it may

also be said that in them a great amount of information is embraced—information, however, that is found in other books, in better company, according to our humble notions.

The *scope* of the Author is very extensive. He not only details the ordinary material that go to make up books on Medicine and Physiology, but enters into the discussion of "*Vitality*," "*Philosophy of Animal Heat*," "*the Humoral Pathology*," "*the Relative Merits of the Microscope in Medical inquiries*," etc.

We have neither the time or the inclination to notice all that the Author has said on these topics. Nor do we know that the reader would be profited by a performance that would consider every idea of the two volumes in detail. We will glance merely, therefore, at what appears in the *scope* to be the mere salient points.

"In our first essay," says the Author, "we have endeavored to show that the great question relating to the *Vital Powers* is in no respect a *speculative one*; and since all our subjects revolve about it, we have made that article also of unusual extent."

There was a time, about 400 years before Christ, when there was a taste for the discussion of such abstractions as the "*Vital Powers*." Such inquiries culminated with the Grecian Sophists, who brought forward as great an investment of intellect to their solution as has ever been done since. What was the result? Plato, who may be regarded as the embodiment of Grecian Philosophy, makes the world a huge animal, possessing "*vital powers*," which vital powers are "*Intelligent and Beautiful*." The "*Archæus*" of Van Helmont, and the "*Rational Soul*" of Stahl, figured at a much later date. What has any of these theories done for the solution of the question of *Vitality*—its essence, noumenon, etc.? The Author proposes the exposition of the vital power by the phenomena that attend the development of the incubated egg. The egg contains the elements found in the organism, but does the Author know *how* these are arranged, in order to make bones, feathers, blood vessels, etc.; or the character of the forces employed in the process? His "*exposition*" contains no evidence that he does. It is verbiage, verbiage, verbiage. If the Author understood himself, he would have found out that the difficulty of what he has undertaken is *its impossibility*. No one has ever cracked the shell of the question; and the Author could not have given stronger evidence of his incapacity to write a book than his failure to know that the jaw bones of humanity were

never designed for such questions. Such efforts were once the pride and glory of the greatest intellects. Disquisitions and generalities on Life, Destiny, and the Universe, occupied the attention of philosophers in all ages of the world, as before suggested, with, however, no other result than the mental exercise and discipline incident to investigation. The brightest intellects found, after centuries of research, that they were still occupied with the same questions. Progress was not onward, but in a circle. Plausibility was not approached, much less truth. The views of *Menes*, the first of the Pharaohs, or those of the Ptolemies, or of Thales, the first of the Grecian philosophers, were as near the truth on the subject as are those of Martin Paine, M.D.

The unprofitable nature of such speculations has led to a crisis in investigation. For some time the human mind has been drifting away from the regions of Causes, Essences, Noumenons, etc., from a consciousness of its incapacity to deal in such ware—or, in other words, to realize any thing from such investments; and it is being now slowly impressed with the idea that it had undertaken too much—and that in a strata a little lower, the results would be better.

Instead of aiming at an insight into the essential nature of things and employing speculation as the instrument in getting at knowledge, scientific men have become convinced that it is only the *Laws* which obtain in nature that can be successfully investigated, and that the material of the investigation is made up of facts and phenomena, their sequences, etc., that observation is the proper *method*, and that experiment is the only instrument by which observations can be verified.

Since such ideas have found their way to public favor, an advance may be noticed. We have now *science*, instead of crude *philosophy*; we have now truths, in the place of speculations; we have now material for deductions, in the place of theories for generalities. Every improvement in machinery opens up new sources of truth; and every fact discovered has its bearing on the Universe.

No department has shared larger from this improvement in the method of inquiry than Medicine. Indeed, it is to this method that we owe all the advance which characterizes modern times. The *fogs* of medicine attained their greatest density in the times of Van Helmont; and no one can understand the enviable position we now occupy, without comparing the present with the period in which this celebrated author flourished.

THE AUTHOR'S VIEWS OF THE NUMERICAL METHOD.—In this connection we may notice the Author's notions of the numerical method of Louis. He has devoted 135 pages of his work to a refutation of this method. We have looked through his performance with some interest, to see whether he really did demolish a method, which, as soon as it was announced, was supposed throughout the world to be an improvement. Who, indeed, could doubt the propriety of applying statistics to medicine—the propriety of observing every case, and every symptom of a case, *numerically*, so as to ensure, as far as practicable, accuracy of observation, and enable us, by the collection and analysis of such facts, to deduce general laws and conclusions? We ask again, who could doubt it besides the Author? His mode of refuting it is queer. In the first place, in his estimation, it is wrong, because it is an innovation on the Fathers—Sydenham, Hunter, Bichat. This is virtually an assumption that there is nothing for the present generation to do. Every thing has been done for us. Somebody has said that there is such a thing as the “sophism of *veneration*”—a morbid respect for authority. We are not certain, however, that this fits exactly our Author. His is a worse trouble. Again, the numerical method is wrong, because Louis makes out by it that typhoid fever is attended by a lesion of the glands of Peyer—which the author says is not true. Suppose Dr. Paine could prove that lesion of Peyer's glands was not constant in typhoid fever, which he has not done; this would not prove that the numerical method is false. The effort would be simply an *ignorantia elenchi*—a mistake of the question, or where one thing is proved instead of another. It is easy for any one to see that the integrity of the method is not assailed by such an operation. Louis' notions of the morbid anatomy of typhoid fever may not have been verified by a sufficient number of cases. This, if so, we repeat again, has nothing to do with the truthfulness and value of the method.

THE AUTHOR'S VIEWS OF THE MICROSCOPE.—These are contained in an *appendix* to the first volume. “The objections”—we quote from the Author—“to microscopic investigations rest on a variety of premises—upon the minuteness of the objects—upon the opposite results of different observers, and upon the conclusions that have been drawn at variance with the phenomena of life, and even the laws of physics.”

“Philosophers and physiologists agree that the sense of sight is

the source of a thousand illusions. How greatly then may these be multiplied by the ‘*deceptions*’ of the microscope?”

“We have already seen that the different observers have arrived by the microscope at opposite conclusions as to the state of the circulation.”

“Still there is sufficient clashing (among microscopists) to show alone the illusory nature of the pursuit.”

“The objects mistaken for fossil animalculæ are nothing but crystalline spicule of the earthy or metallic substances.”

“We think it may be safely affirmed that the microscope has not added to our knowledge a *solitary* fact of practical use to atone for the evils which it has inflicted.”

“The great founders and promoters of physiological science had either no knowledge of the microscope, or condemn its use.”

It is no part of our intention to notice formally any of these objections. To those who understand themselves, and have paid the least attention to the means by which medical science in our day has been advanced, such an undertaking would be regarded as supererogation. There are, however, many young men who may be unfortunate enough to become possessed of this work, and who may, as a consequence, be impressed with its stale enervating suggestions. For the benefit of such, therefore, a thought or two may not be out of place.

All instruments for research, as well as all kinds of machinery, when first constructed, are, as a general rule, in their objects, very imperfect. This is eminently true of optical and other philosophical instruments. On looking through the history of the microscope, it will be observed that in its *Simple* form, that of a single lens, uncorrected, it was employed in our profession for a considerable length of time; and, while some very important facts were added to science by the early cultivators, there was much suggested that has not withstood subsequent scrutiny. The *Compound* microscope, which proposed a wider range, and the inspection of subjects more minute, was not more fortunate in its revelations than the simple one. *Spherical* aberration, and *chromatic* aberration were among its leading faults—faults that rendered it a very uncertain means of getting at size, structure, etc. While in this state, the observations that were made have had to be revised. By, however, the highest order of mechanical ingenuity, philosophy, and science combined, the instrument has been perfected to an extent that now entitles it to almost the same

confidence as the human eye; and even in the use of its highest powers, its decipherings are by no means always erroneous. Like the eye, it will be truthful as long as light is truthful. When an object is so minute that its inspection is incompatible with the properties of light, the instrument will of course fail, but only then. The powers of the eye, unassisted, takes, perhaps, cognizance of objects $\frac{1}{400}$ of an inch in diameter; the compound microscope will appreciate striæ $\frac{1}{80000}$ of an inch apart. Stretched to the extent of their powers, both the eye and the microscope are a little uncertain, but used within proper limits, and with a due reference to circumstances, both may be alike relied on.

Why did not the Author, it may be inquired here, object also to the Telescope—the instrument that has built up the science of Astronomy? This, like the microscope, augments the powers of sight. In gazing through it, we are enabled to “penetrate the unfathomable depths of space, and take cognizance of world beyond world, and system beyond system, whose remoteness cannot be expressed by any form of words that shall convey a distinct idea to the mind, and to bring the members of its own group within such visional proximity to ourselves that we can scrutinize their appearance nearly as well as if they had actually been brought a thousand times nearer to us.” The increased precision of celestial observations by the telescope furnished Kepler with the data on which he based his statement of the motion of planets; and it was not until the precise measurement of a degree upon the surface of the earth, that Newton was enabled to verify and establish the Law of Universal Gravitation. We repeat, why not object to the Telescope, and ignore all that has been achieved by it? It throws the human eye around the large objects of the celestial universe—the Microscope penetrates the small ones of the terrestrial.

Incident to all severe scientific research, there must be, of necessity, at first, more or less diversity in reported results. Chemistry, even, one of the exact sciences, owing to inexperience and imperfection in apparatus, gave rise for a long time, to difference of opinion in regard to the composition of certain compounds. It would, indeed, be very strange, then, that we should find the young science of Microscopy an exception to a general rule. Its cultivators, as we have seen, had to work for a great while with imperfect instruments. They had to contend against pre-conceived theories and

opinions ; and they had also to learn that observations were not worth any thing, without due attention to the *conditions* under which they were made. To surmount all of the sources of fallacy, required time, patience, and energy ; and now, instead of being upbraided and twitted for former discrepancies of opinion, the cultivators of the science should be congratulated on their comparative agreement on the characters of the most minute objects.

If our Author will *now* consult the labors of Microscopists, he will not find among them, as he once did, any great diversity of opinion as it regards the size and form of *blood disks*, *pus globules*, *cerebral cells*, or on the ultimate structure of muscular fibre. They have learned the sources of the discrepancies and disagreements of former times, and have corrected them ; and it seems strange to us that any one should aspire to the responsible task of furnishing the age with a book to be placed in the hands of the rising generation, without having possessed himself of such information.

If the Author were not greatly our senior in the "length of his days," we would suggest to him, for his own sake, not less than for the cause of science, that he consult the ordinary text-books, Hassall, Kolliker, Carpenter, etc., before he allows another edition of his "*Commentaries*" to be published.

"The objects mistaken for fossil animalculæ, are nothing but crystalline spiculæ of the earthy or metallic substances."

Not content with calling in question Microscopical Anatomy, the Author enters the field, very fiercely, against those who have been investigating earths, rocks, etc. The observations of Microscopists are not to be credited here at all. They are, in his estimation, simply ridiculous. What will the Palontologists—those who have been engaged in studying the fossil animals and fossil vegetables of the different crusts of the earth—say to such language as is found in the above quotation ? We imagine a few of their involuntary expressions : "Why, who is Dr. Paine ?" "Where does he live ?" "Is'nt he cracked ?" "The man knows nothing." "He has never looked through a microscope, certainly." "His objections lie against the existence of all fossils, large as well as small." "Take him out—take him out." "He wont do at all."

The flora and fauna of the rocks, or the ancient organisms, have engrossed a large amount of the intellectual labor of the present century. It is no part of our design to allude, however, to what has been accomplished. This would require volumes, rather than

pages. A late writer on the subject, (Hugh Miller—Testimony of the Rocks,) says, in substance, that “these ancient organisms bear nearly the same relation to the *physical* history of the past, that biography does to the *civil* and *political* history of the past. The science of ancient organisms, enumerates and describes all the organic existences of all the extinct creations, all the existences, too, of the present creation that occur in the fossil or semi-fossil form; and thus coextensive in space with earth’s surface—very greatly more than coextensive with earth’s surface—for in the vast hieroglyphic record which our globe composes, page lies beneath page, and inscription covers over inscription—coextensive too, in time with every period in the terrestrial history since being first begun on our Planet.”

This very accomplished Naturalist says that he finds in the fossil state, the four leading types of faunas, corresponding to what we have at the present time in the living state. The small and minute of the star-like type are found, as well as the large vertebrated; and what is instructive, the Lower Silurian system, which is deficient in vertebrated fossils, contains the *star-like* type, the lowest form of animated existence—the very form with which the microscope has had so much to do in modern times.

Has Hugh Miller, and all other Naturalists, after lifetimes of labor, been mistaken about these fossil animalculæ? Are they really nothing but “crystalline spiculæ of earthy or metallic substances?”

Many of the most trust-worthy Naturalists tell us, also, that they have ascertained with the Microscope the essential nature of very many of the deposits that form important parts of the earth’s crust.

The *Nummulitic* limestone, of which the Pyramids of Egypt are built, and that forms a band of great breadth, extending from the Atlantic shores of Europe and Africa, through Western Asia, to Northern India and China, and over vast areas also of North America, is said to be, in large part, composed of *Foraminifera*, the lowest, or *Rhizopod* type, of animal life. In the Carboniferous (palæozoic) limestone, well preserved specimens of *Foraminifera* present themselves, belonging to a genus now extinct, the *fusulina*. In nearly all Chalk formations, in the mud at the bottom of the oceans, seas, lakes, fossilized organisms, belonging to the families *Foraminifera* and *Diatomaceæ*, are found in great abundance. Then, again, we have the so-called “Infusorial earths” of different

countries. A stratum of some 18 feet in thickness, of this infusorial earth, it is said, underlies the city of Richmond, Virginia, and extends over an area whose limits are unknown. These earths are very celebrated for the number and variety of faunas they have yielded.

Before any one should fall into the error of the Author in confounding the minute organism, to which we have alluded, with "crystalline spiculæ of earthy or metallic substances," it would be well enough to look into the subject of Crystallography a little, the laws with reference to the *forms*, primary and secondary, which inorganic matter assumes when under the influence of this process; and also the laws relating to the *cleavage* of crystalized bodies. The faces, angles, edges, bases, etc., which make up the outlines of a crystal are peculiar to certain substances—yet there are a few types, perhaps not more than six, to which all crystals conform. These have their characters well defined by Haüy, Brooke, Wollaston, Daniel, and others. After studying up this subject a little, then look into a few of the general characters of, for example, fossil *Diatoms*. Diatoms, it is believed, are simple cells, with a membranous covering consolidated by silex. The covering or envelope is made up of two valves, symmetrical, and closely applied to each other, like the valves of a Mussel, and having the concavo-convex form. The valves, have striæ upon their surfaces of as much uniformity of value, in the same species, as obtains with reference to muscular fibre. The silicious external covering includes a mass of yellowish matter (endochrome) which, in the recent state, has motion—circulates from one end of the valve to the other. In the centre of each valve a *nucleus* may be seen.

We would simply ask now, whether there seems from this brief reference, to be any agreement between such characters and the laws of crystalization? No one, we are convinced, could make such a mistake who had given the least attention to the subject. The human skeleton resembles "crystalline spiculæ," just as much as does the skeleton of a Diatom. Our prescription, if we were honored with a consultation over any one who would make such a mistake, would be that he should at once possess himself of a Microscope, collect up some of the things that he calls crystalline spiculæ, (and he cannot go amiss to find them), and take a squint or two at them—and we stake a box of pills on it, that he will be cured. If, however, that don't cure him, we would advise him to "travel."

Badinage aside, our aim, in this connection, has been mostly to call attention to the great range which the Microscope takes in scientific pursuits, and to the fact that its revelations constitute the substratum of our knowledge of organic matter.

We quote from the Author again: "The great founders and promoters of Physiological science had either no knowledge of the Microscope or condemned its use."

Vesalius, Hippocrates, nor Celsus, nor Galen, could not have known anything of the Microscope, because in their times it was not invented. Nor was Sydenham, Boerhaave, Haller, Bichat, or the Hunters, more fortunate. When the most of these great men figured, the instrument was in a very imperfect state, and the errors incident to its limited use not at all understood. We have no knowledge that any one of these men, however, condemned the instrument. They knew nothing of it, and therefore could say nothing. We have no disposition to underrate the labors of any one, but all that know any thing of the history of the profession, know how imperfect and unsatisfactory was the condition of many things anatomical and physiological, even after the labors of the distinguished men to whom we have alluded. Harvey had given us an ingenious theory on the circulation of the blood, but it was left for Malpighi, with an imperfect Microscope, to demonstrate that the blood was *not an amorphous substance*, but composed of cells floating in a fluid, (the liquor sanguinis.) This distinguished Microscopist was also the first to witness the marvelous spectacle of the movement of blood in the capillaries of a frog's foot, thus verifying the truth of Harvey's doctrine that the blood passes from the smallest arteries to the smallest veins. Harvey's doctrine would have remained until the present day, as merely a rational probability, had it not been for the Microscope. Robert Hooke, and Leeuwenhoek likewise, during the latter half of the 17th century, contributed largely to Anatomy and Physiology by the use of the Microscope. The Transactions, it is said, of the Royal Society "literally teem" with their discoveries. Who is there, indeed, that writes on Physiology in modern times without alluding to the labors of these observers? Who is there that says any thing about the kidney without alluding to the early and truthful views of Malpighi on the structure of the organ. From the imperfections of the Microscope, and from the want of the facility which characterised the use of it by the early observers, it fell, as before remarked, into discredit, in which condition it remained until

the present century, a period of more than one hundred and fifty years. Since, however, the improvements by Dolland, Lister, Huyghens, on *Object Glasses*, *Angular Aperture*, etc., the instrument has come into use again; and we can now scarcely look into any thing pertaining to Nature or Art without recognising the improvements it has contributed. Medicine has shared very liberally of these. Its great departments, Anatomy and Physiology, have been richly endowed. All the late works on these branches are filled with the revelations of the Microscope. It has come to be a settled conviction that *function* can only be understood by associating it with the forms and relations of structural elements. Histogeny and Histology are departments that have been created solely by the Microscope. What did Bichat, who is regarded as the father of Histology, really know of the minute structure of the bones, brain, nerves, muscles, mucus or serous membranes, or glands? Scarcely any thing at all. The powers of the unaided eye do not extend to such things. The preliminary discoveries even had not been made in Bichat's day—discoveries without which nothing rational could be predicated. It was necessary that Schwann, Schleiden and Valentin should point out the fact that *cells* lie at the foundation of all organized forms, and that the first named should make the application of this discovery to the elucidation of animal tissues—and that Heusinger should indicate how fibres and tubes are formed from *cells* by linear arrangement.

It is known to our readers that a controversy has been going on for some time in regard to the existence of an alleged system of nerves, called the *excito-secretory*, and the *function* that results from this system in health, during the operation of medicinal agents, and in disease. Some time since, Dr. Campbell claimed the discovery of this function, and in regard to this Marshall Hall says—"the *idea* and *designation* of excito-secretory action belongs to Dr. H. F. Campbell, though the elaborate *experimental demonstration* of *reflex excito-secretory* action is the result of the labors of Bernard." Subsequently to the claim set up by Dr. Campbell, Dr. J. Allen, of Michigan, has set up one to the same discovery. He says: "What I claim is the great generalization, that excito-influence is followed by a reflex change, in which the effect is not a *motion*, but a modification of *vascular* and *nutrient* action. That this takes place by means of the *double nervous arc*." To these claims Dr. Paine enters a protest. He and his friends claim that he elaborated this excito-secretory

system years ago, and that he showed, in the work before us, its application to the elucidation of the *modus operandi* of medicines, the effects of external agents upon the body, the laws of pathology, etc. It is, indeed, contended that it forms the ground work of his writings, and is everywhere made the leading principle.

Now in regard to all this, we only have to say, that the *discovery* here spoken of, of an *excito-secretory action*, is mere theory—a phantom. Excito-secretory action, that implies a distinct system of nerves, it is well known, was talked of by Bichat, Wilson, Henly, and Brodie; and Muller, in his Physiology, has a chapter on it and the action on the Sympathetic nerve. Who, indeed, could talk about the nervous system and secretion, without regarding the agency of the one over the other? The only experiments, looking to the proof of the action, are, as Marshall Hall has said, those of Bernard; and these are far from being conclusive. Dr. Paine has made no experiments. All, as we understand it, that he has done, is to resurrect an old theory—a theory that has been in the mouth of every one having capacity enough to comprehend the plain principle, that the *action of secretory organs is as much under nervous influence, as is the action of the voluntary muscles*, and apply this principle to the elucidation of the *modus operandi* of medicines and the phenomena in physiology and pathology. No one can claim more than this for our Author. Of the value of this, in these times, when all theories are at a great discount, each one can be his own judge.

In a late (July) number of one of our “exchanges,” the *New York Journal of Medicine*, a reviewer writing over the initials C. A. L., to our surprise, endorses Dr. Paine’s work, as being a treasure of information. “It will grow brighter with time.” “The profession will delight to cherish it and do it honor.” This reviewer, it seems, bases all his encomiums upon the circumstance that the *excito-secretory* theory pervades the work. He alludes to no other feature of it—not even an allusion is made to the manner in which chemistry is ignored in pathology and physiology, or to the flings at the numerical method, or the ignorance displayed in regard to the microscope. Indeed, the review, no less than the work, is calculated to mislead. How this reviewer could shut his eyes to such blemishes in an Author who aspires to teach the professional idea “how to shoot,” is a mystery perhaps only unraveled by the poet—

“There ne’er was a goose but soon or late,
Could find an honest *gander* for a mate.”

The Principles and Practice of Obstetrics. By HENRY MILLER, Professor of Obstetric Medicine in the Medical department of the University of Louisville, with Illustrations on wood. Philadelphia: Blanchard & Lea.

The above is an octavo of 626 pages. The work is executed in a manner highly creditable, not only to the celebrated house from which it issues, but to American publishing enterprise. We are at a loss to whom to accord most credit, the manufacturer of the paper, the printer, the engraver or the binder. Considered in all these aspects it is a work of high order. The wood cuts illustrative of the more elementary parts of the work are mainly reproductions of the figures illustrative of the work of Prof. Dubois. They are abundant and apposite.

There are reasons for which, in common with the great body of our readers, we take the liveliest interest in the book before us. It is not only one of the few treatises on Obstetrics, by American authors, but it is, so far as its authorship is concerned, a Western production, and the *first* on its subject, which the West has produced. So that we are not only interested in it as an American work, but deriving great gratification from this consideration, we are doubly interested in it, as being a product of the young West.

Several years have elapsed since the first edition of this work was announced, under the title of a "*Theoretical and Practical Treatise on Human Parturition.*" It unfortunately fell into inefficient hands, so that although it was printed and handsomely commended by the press, the publishers failing entirely, its circulation was so slight that we now speak of it as making its first appearance.

In the outset, this is a volume of moderate size. The author has not "deemed it proper to cram the work, by introducing into its pages every topic, both large and small, that belongs to obstetrics." By observing a careful silence in regard to such minor topics, he is enabled, small as his volume is, to discuss the leading cardinal topics of his subject, not only in an easy, elegant style, but with decided ability, and even elaborately. For illustration we name the subject of flooding, more particularly, the subject of unavoidable Hemorrhage. We know of no systematic work which treats of this so thoroughly. In the outset of the discussion, our author dissents from the ordinary explanation of the manner of its occurrence, predicated upon the commonly received description of the development

of the uterus, viz: that its fundus enlarges or grows first, then the body, and lastly, that during the last three months of pregnancy the cervix undergoes a transformation by which it comes to constitute a large proportion, say one-third of the entire uterus. On this subject he remarks, that, "Notwithstanding that this dogma has been so generally received, it is unsupported by any proof that should entitle it to our credence, and is at irreconcilable variance with the very doctrine with which it was intended to square, and which seems, indeed, to necessitate it. * * Inasmuch, then, as the fully developed uterine cavity measures say twelve inches from the os uteri to the fundus, the inferior third, viz: four inches of its parieties, must be furnished by the expanded cervix. It is evident, therefore, that the area of the developed cervix is at least equal to that of the full grown placenta, and in order that the placenta may implant itself upon it, even to the borders of the os uteri, it must either be enormously hypertrophied during the last three months of gestation, or it must be transplanted from the body to the cervix uteri. The latter alternative, being simply ridiculous, will not be defended by any one, nor do I see how the first can be defended with any show of reason; for, first, the supposed hypertrophy must take place at the center of the placenta instead of its circumference, which is contrary to the law of its development, and implies that new cotyledons spring up among those whose formation is the oldest; and, secondly, were there such an expansion of the placenta, as the doctrine supposes, the entire organ, in placenta previa cases, ought to be twice as large as under ordinary circumstances. This follows from the well known fact that the growth of the placenta is nearly, if not quite, complete by the sixth month of gestation, when its cervical implantation must begin, and new placental structure, equal in extent to that already formed, must be produced. * * * * *

It must be obvious that, if the cervix be so largely amplified, as the doctrine alleges, and the placenta be incapable of corresponding growth to occupy it, the placenta, in cases of abnormal implantation, would be ultimately stretched across the uterine cavity, upon a level with the junction of the body with the cervix of the organ, and thus be far removed from the os uteri."

This carries with it, of course, a rejection of the ordinary explanation of the occurrence of hemorrhage in placenta previa. Our author philosophises thus in regard to it:

"During the first six months of pregnancy, the uterus is devel-

oped at the particular expense of the fibres of the fundus of the organ, whilst, during the last three months, the fibres of the inferior part of the body are rapidly developed, insomuch that the further increase in size of the uterine cavity, is acquired principally by the expansion of this portion of the uterus, as its pyriform shape in the early, and its perfectly ovoidal shape in the latter months of pregnancy proves. This fact in respect to the development of the uterus, taken in connection with a fact already adverted to, viz: that the placenta has nearly completed its growth by the sixth month of pregnancy, affords a ready explanation of the occurrence of hemorrhage. When the placenta has its usual insertion, its development corresponds with that portion of the uterine walls upon which it is implanted, and there need be no hemorrhage; but, when it is inserted immediately over the neck, or even in its immediate vicinity, the matured placenta cannot follow the rapidly expanding parietes of the uterus, and hence the stretching and rupture of the utero placental vessels, and the unavoidable production of hemorrhage.

In this chapter the author has felt impelled "to give expression to views at variance with those generally accepted, and, in especial, to call in question the propriety of delivering by *turning*, even in the greatest exigencies that can possibly occur, whether the labor be of the *accidental* or *unavoidable* kind. It is very well known that, in the latter part of the last century, the doctrine was peremptorily inculcated by Dr. Rigby that, in all cases of unavoidable flooding, i. e., flooding produced by the implantation of the placenta over the cervix uteri, delivery by turning and bringing the child by the feet, so soon as it is practicable, is the sole resource of obstetricity, on the due performance of which the salvation of the patient depends. This doctrine has been generally received and acted upon until recently; but, at this time, there are plain indications of dissatisfaction with it, and milder methods of treatment have been proposed, under particular circumstances. But I do not know that any writer has proposed the abnegation of the practice of Rigby, in all cases, and the substitution of less harsh and hazardous expedients. This I have ventured to do. I could, indeed, do no less, for I have never met with an instance of unavoidable flooding, in which I deemed it imperatively necessary to deliver by turning. On the contrary, it has always appeared to me that to deliver by the feet, when the head of the child presents, is a high-handed measure, not only in flooding, but under any circumstances of perturbation, and one that is much

more likely to be productive of evil than good, either as to the mother or child."

The author enters into a careful consideration of the proposition of Simpson, to separate the placenta and wait for the spontaneous expulsion of the contents of the uterus, but does not attempt to decide upon the comparative merits of the Simpsonian method, seeing that it has not been fully put into practice.

Neither has he overlooked the practice of Gendrin, "*which consists in puncturing the membranes through the placenta with a female catheter, and evacuating the liquor annii.*" Inasmuch, as at the time of the publication of his treatise, he (Gendrin) had only put his practice in operation in two cases, this, of course, is not sufficient to establish it on a firm basis.

The author enters into an elaborate exposition and defense of Puzos' method. He claims that it has been extensively and chronically misapprehended and misrepresented; that it consists "primarily of digital dilatation of the os uteri, gently made, it is true, but nevertheless affected by whatever force may be required, and carried so far as to command uterine contraction. * * The method consists secondarily in rupturing the membranes after they are rendered tense by the genuine labor pains, excited by the artificial dilatation of the os uteri."

And, finally, he proposes a modification of it. "This consists in originating expulsive contraction by the tampon or plug and then puncturing the membranes, relying on the tampon to control the flooding until the liquor annii is evacuated."

These various methods are elaborately and ably discussed. We know of nothing in obstetric literature, more worthy of consideration. It of course cannot be expected that a purely elementary work, such as that before us, can contain very much that is either new or of striking interest. And yet there is mingled with the one before us the result of so much independent thought, that this book will be perused and even studied, with great interest. It is highly creditable to American Medical literature, and if we are not greatly mistaken in our estimate of it, it is destined to a front rank among Obstetric text books.

H.

Contributions to Operative Surgery and Surgical Pathology. By J. M. CARNOCHAN, Professor of Surgery in the New York Medical College. With Illustrations.

Prof. CARNOCHAN, for a man of his years and experience, has done much, alike creditable for originality of conception and boldness of execution. His cases have already gone abroad in the current medical literature. But he is now reproducing them in a new, and under all the circumstances, peculiar form.

The work before us is No. 1 of a series of 10 numbers, to be issued quarterly, in quarto form; the whole to constitute a complete volume, the first of a series.

The present number contains the description of the removal of the entire lower jaw, with four cases of Elephantiasis Arabum of the leg, successfully treated by ligation of the femoral artery.

Dr. C. claims that his amputation of the entire inferior maxillary bone, is the first on record. This may be true. But we are not quite satisfied with the process of reasoning by which he is led to the conclusion. He discredits the commonly conceded success of Walther of Bonn, because he cannot trace the "truth of it to an official source." Whoever may be entitled to priority, it is quite certain that the successful amputation of the entire inferior maxillary bone is among the very recent achievements of surgery. Partial Exsections even were not ventured upon till 1810. The pioneer in the practice was Dr. Deadrick, of Tennessee, followed by Dupuytren in 1812, who however performed his operation without the knowledge of that of Dr. D. Since that time exsections of portions of the bone have been common operations. In fact its total ablation has already been performed with a frequency and success sufficient to entitle it to a place among the regular operations of surgery. Maissonneuve reported his third successful case more than a year since.

There are some features of the above ablation of the lower jaw in regard to which we have serious misgivings, and to which, perhaps, we will devote some attention in future.

H.

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

MICROSCOPY.—This young science is receiving a very respectable share of attention in our city. There are here now instruments from the most celebrated manufactures at home and abroad, with pretty much all the accessory apparatus that the greatest amateur could desire. The low and medium powers have, by gentlemen here, been employed for years in certain departments of natural history. Lately, however, the taste has been for the utmost capacity of which the instrument is capable. The design was to see what could be done with object glasses of $\frac{1}{8}$ th, 1-12th, or 1-16th of an inch focus, employing with these the deeper eye-pieces, and all the most approved methods of illumination. Objects for experiment have been taken from the class of bodies known as the *Diatomaceæ*, and the principal intention has been to test the “*resolving*” power of instruments. Objects that were formerly regarded as “test objects,” such as *Pleurosigma angulatum*, and *Pleurosigma Spenceri*, the former having 52, and the latter 55 lines in 1-1000th of an inch, were resolved without any trouble. Others, where the striæ were more minute, have been satisfactorily resolved. Indeed, objects have now been resolved here having 90 lines in 1-1000th of an inch. Perhaps this is just about as much as has ever been done, for it is very near the place where the properties of light give out, or, in other words, where the workings of the microscope are incompatible with the laws of light.

We have, as our readers will recollect, often alluded to what the microscope has done, not only for almost every department of physics, but also for medicine. By it, and organic chemistry, Physiology has been placed on almost a totally new foundation; while to pathology it has been equally valuable. A knowledge of the normal movements of an organ, is simply inseparable from correct ideas of its form, size, structure, relations, etc. Then, again, proper views of these elements lie at the foundation of Pathology. Who could appreciate the character of the changes of structure, or the alterations of fluids, made by disease, without knowing something of the natural state? Nor is *diagnosis* behind either of the branches

to which we have alluded in its indebtedness to the microscope. In scarcely any case can the instrument be entirely dispensed with, whereas, in many it is the only available means we possess of getting at the nature of the complaint.

Such being the case, the instrument certainly commends itself to the attention of every one in the profession, and especially to those who wish to take with their *confreres* a respectable rank, and make themselves of the greatest use to their patrons. It is often objected that microscopy is laborious, and requires a great deal of time, Is this true? What, that is worth any thing when acquired, that does not consume time? But microscopic researches are far from being laborious. It is true they can be made so; but this is unnecessary. The time often devoted to loose unconnected thinking, unprofitable conversation, or loafing, if employed in the pursuit before us, would at the end of a few years be found to accumulate a pretty good stock of information; besides, tastes would thus be created that would make the individual a happier and better man.

A gentleman remarked to us several years since, that he thought the Microscope had accomplished about all of which it was capable. Since that time, however, important improvements have been made in the instrument, and new fields have been opened up. In the estimation of those best qualified to judge, we are just entering the threshold of researches, that are as full of promise as any that have yet been prosecuted.

Those who wish to possess themselves of Microscopes, are often at a loss for the proper information. Heretofore most of the instruments came from abroad, but few being made in this country. The most celebrated makers abroad, are Ross, Smith & Beck, Powell, and Leland, all of England; and Natchet and Oberhauser, of the Continent. The Continental makers heretofore have afforded good working instruments, at the least expense, and hence they have had the most patronage from this country. Many of the finest instruments, however, of our country, with all the accessory apparatus known, are from one or the other of the above English firms.

It gives us pleasure to state, in this connection, that we have now in the United States several makers of Microscopes, perhaps not excelled any where. Among these may be mentioned the Grunows, and Spencer, and Tolles, the latter two of N. York. Several instruments from the first named house, located at New Haven, Conn., have lately been purchased by gentlemen residing here, and it may be

said of them, that they give perfect satisfaction, and are afforded at reasonable prices. We have before us the Illustrated Catalogue of this firm, from which may be seen the different forms of the instruments manufactured, the accessory apparatus, etc., with a list of prices. The *Catalogue*, any one can obtain by addressing the company, at New Haven, Conn. An advertisement of this house will be found in the present number of the Journal.

NEW MEDICAL JOURNALS.—We notice that several medical journals have “*went up*,” within a short time, in one way or other. It would not do to explain this by the great pecuniary troubles through which our country has just passed, or rather, is just passing ; for, as many new ones have made their appearance within the time. Among the new ones we notice the Savannah Journal, edited by Drs. Sullivan, Harris, and Arnold ; the Oglethorpe Journal, edited by Drs. Bird and Steele, also of Georgia ; the Maine Medical Journal, edited by Drs. Richardson and Cummins ; and the Belmont Medical Journal, edited by Dr. Afflick, at Bridgeport, Ohio. We might also state that several new medical journals have lately made their appearance in foreign lands. One of these in old Athens, the other in Constantinople.

Our country is undoubtedly, better than any other, supplied with medical journals ; and yet there are hundreds of physicians who have not subscribed for one, and who know no more of what is going on in the profession, than they do of what is going on in *Hades*. There ought to be a prize offered for the best essay on a sovereign remedy for just such cases—cases of chronic “*photophobia*.”

STARLING MEDICAL COLLEGE.—If appearances are worth anything, there will be an increase the ensuing session, of students, at this Institution.

For the information of those who are looking in this direction, it might not be out of place to state that our location, for all the purposes of a medical college, is not behind that of any other in the country. We have here plenty of material for the study of Anatomy, the very first quality of chemical apparatus, and clinical privileges as great as could be desired. Then again, the Faculty are ambitious—not only to fill the mind of the student to the utmost

of its capacity, but to inoculate it with the zeal that will make its possessor a living working man throughout life.

MANNER AS AFFECTING PROFESSIONAL SUCCESS.—The *Boston Medical and Surgical Journal* has, in one of its Nos., (August 19), some very sensible remarks under the above caption. We agree with the editor in most of his views. "The simple graces of manner which a hearty interest in human welfare always prompts, are never more acceptable than in the sick room."

Good manner, as an element of success in professional life, has in the general way been always heartily endorsed. But what is our understanding of a "good manner"? St. Paul would define it, "Being all things to all men." A Platonist would define it, having a dignified bearing, with the appearance of being all the time in a brown study. A votary of Chesterfield would say, "*Suaviter in modo, fortiter in re.*" The celebrated Abercrombie would say that good manners consisted in being taciturn generally, and only answering questions by grunts. Count McFlurty would say, that in his opinion, it consisted in having at the end of the tongue all the time, the most recently invented bye-words, witty and comic sayings, and a ratiocination of the *ad captandum* style. Deacon Diffendoffer would say that it consisted in being a little on the reserve before strangers, in the use of soft, oily, well-chosen words, in the wearing of a smile all the time, and in the taking of sides on no question that comes up. The deacon, however, would qualify by allowing assent by "winks" and "nods." We might enumerate others who had "defined their position" on this knotty question, but our space will not admit of it.

If we were allowed to express an opinion on such a delicate question, we would certainly coincide with our cotemporary of Boston. "A heartfelt interest in human welfare" gets up, in our judgment, the best phenomena for the sick room. If we were asked about the manner most politic even for a young medical man, we would reply, "*Be yourself*"—"the attempt to be anything else will, at best, but make you a monkey."

PROFESSOR FLINT OF BUFFALO.—We notice, by the August No. of the *Buffalo Medical Journal*, that this gentleman has been appointed to the chair of Clinical Medicine and Auscultation and Per-

cussion, in the New Orleans School of Medicine. This appointment will not dissolve, we are assured, the connection of Professor Flint with the Buffalo School—a School that we take pleasure in stating has in its Faculty a good proportion of the ablest men there is in our country.

MEETING OF THE OHIO STATE MEDICAL SOCIETY FOR 1858.—As we informed our readers at the time, the proceedings of the last meeting of the State Medical Society were crowded out of our last issue, by our very full report of the proceedings of the American Medical Association. They will be found elsewhere in the present number.

We were present. It affords us pleasure to say that it was an exceedingly pleasant occasion. Very little time was lost in selecting officers, who discharged their duties most satisfactorily. An admirable spirit prevailed throughout. There was a remarkable absence of parliamentary skirmishing. There were no quarrels or jealousies, either indigenous or exotic, fancied or real, to be disposed of; and many will no doubt be astonished to learn, that, from first to last, medical colleges, medical professors, and medical education, were not mentioned; and we had no special reason to suppose they were even thought of. We were led to hope that the time was approaching when the great body of our brotherhood recognized that its elevation is not to be accomplished by windy declamation or furtive resolves, nor by any fitful or spasmodic extraneous agencies—but by the personal and determined endeavors of the individuals who compose it, assiduously improving all the means furnished by a progressive and progressing state of society, as the great and only adequate method of its consummation.

There is a fact, however, of which we speak with regret. At the first assembling the meeting was very small, consisting, if we are not mistaken, of little more than twenty old members, with a few physicians, who were at once admitted. This was to some extent compensated for by the attendance of a fair number of the physicians of the vicinity, who being admitted, swelled the meeting into respectable dimensions.

This will appear the more striking when it is borne in mind that, till within the last few years, these annual convocations brought together hundreds of the members of the profession, representing all parts of the State. In the late meeting, more than two-thirds of the

counties, including almost the entire southern portion of it, were unrepresented.

Another feature was equally unfortunate. Of the numerous committees appointed last year, *not one reported*, and *very few of them were represented*.

These things, taken as the last of a train of incidents, running through the last few years, indicate a great degree of apathy, which we fear is extensively prevalent, and becoming confirmed to a degree sufficient to give rise to unpleasant apprehensions as to the future of the society.

Whether with or without sufficient reason, many of those who attended the meeting at Zanesville, and the last one in Columbus, returned home, feeling that they had realized poor compensation for the sacrifice of business and comfort, and the expenditure of time and money, to which they had subjected themselves. Many were deterred from attending the Sandusky meeting, by the apprehension that the offensive and farcical features of the two previous sessions were to be re-enacted; and, in fact, these unpleasant forebodings have, on an extensive scale, become chronic.

In addition to the above misfortunes, we are inclined to attribute something to the migratory policy of the society. With a view to enlist new members, the meetings have been carried successively to various parts of the State. The result is a considerable yearly addition to the membership, which abates most of its interest, at the expiration of the meeting; so that the gains in working material are trifling in comparison with the loss sustained in consequence of the irregularities inseparable from the policy.

As to the practical aspects of the matter, our views may be inferred from the following: Give us five successive meetings at Dayton or Columbus, with chairmanships for committees selected from those who are accustomed to prove their faith by their works; exclude from these meetings, as far as possible, all ethical or other questions that can open up wounds, bruises, and putrifying sores, and at the end of the time, we venture to predict, the organization will have vitality enough to sustain itself through another brief, waning, sickly career of itinerancy, if it is disposed to the self-infliction.

It is due to the physicians and citizens of Massillon, that we state that the reception had at their hands is unparalleled in the history

of the society. On Tuesday evening there were entertainments at the residences of Mr. S. Hurd, Esq., Col. Kent Jarvis and Gen. Dwight Jarvis. On Wednesday evening at the residences of Dr. Steese, Dr. Watson and Judge Kelley. On Thursday evening the society joined the profession, citizens, and ladies of Massillon, in an entertainment at the — House. These were sumptuous affairs, creditable to any occasion.

On Wednesday at 7 P. M., we were favored with an eloquent and striking address, by that untiring friend of the society, Dr. T. W. Gordon, on the subject of modern achievements in science and the arts. H.

MARSH, CORLISS & Co.—We wish to call attention to the advertisement, in its appropriate place, of this firm, engaged in the manufacture of surgical appliances of various kinds. We have met with a few cases in which, after careful examination, we were convinced of the success of their truss in the radical cure of hernia. Their appliances, as far as we have examined them, are of superior material and workmanship. H.

THERE are at this time about fifty cases of typhoid fever in the Ohio Penitentiary, nearly half of which are either mild or convalescing. Within a month past more than twenty cases have been dismissed, cured ; four have died. H.

IODINE AS A FEBRIFUGE.—M. Barbaste tried the effect of this substance in three cases of old intermittent and paludal cachexy, for which quinine had been given in vain. He was quite surprised at the promptitude of the results he obtained from administering 30 drops of tincture of iodine in a bitter infusion in the twenty-four hours, divided into three doses. M. Seguin had, indeed, as far back as 1846, recognized the utility of iodine in obstinate chronic ague, which resisted quinine : while Dr. Manfredonia, of Naples, in 1855, found that very obstinate cases yielded rapidly to the iodide of quinine, in doses of from 1 to 2 drachms per diem. Thus far the iodine has been found only applicable to old, inveterate cases.—*Revue Méd.*

TEARS CONTAINING SUGAR FROM A CASE OF DIABETES.—Dr. Gibb showed to the Pathological Society (May 18) some tears shed by a young married lady, aged 21, the mother of one child, who has had diabetes for two years since the child was weaned. They contained a large amount of sugar, as contrasted with that in an equal bulk of her urine, which was of the specific gravity of 1043. An evaporated drop of the tears on a piece of glass gave a much thicker and more opaque crust than was yielded by a drop of the urine.—*Med. Times and Gaz.*, July 3, 1858.

PAINLESS CAUTERIZATION.—M. Piedagnel has lately proposed to mix a certain proportion of hydrochlorate of morphia with caustic pastes, so as to lessen, if not to remove altogether, the pain connected with the application of such pastes. To three parts of the compound known as the Vienna powder, M. Piedagnel adds one part of the morphia salt, both in the dry state; and the paste is to be made by adding either chloroform, alcohol, or water. In fifteen minutes a dark eschar is formed. As physician to the Hôtel Dieu the author could use his anæsthetic paste only when ordering issues, &c.; but it has been tried in M. Jobert de Lambelle's ward, upon scrofulous tumors of the neck, and an encephaloid cancer of the foot. The patients stated that they had experienced little or no pain.—*Lancet*, June 19.

OVARIAN DROPSY TREATED BY INJECTION OF IODINE.—The practice of treating ovarian cysts when single by the injection of iodine seems to hold its ground, and, indeed, to decidedly gain in favor. Dr. West and Mr. Paget, who, in St. Bartholomew's, have, we believe, had a larger series of cases than any other of our London men, have obtained results which have been on the whole quite satisfactory. The reader must not from this suppose that any cases have been cured off hand by a single injection. In almost all more than one injection has, we believe, been required; in several the treatment, although repeated to a third or fourth, did not seem to have much effect; and in the best all that ought perhaps to be asserted is, that the secretion has been arrested. In a disease in which the radical method of treatment, and the results of non-interference are both so formidable, the simple arrest of the tendency to refill, even if the tumor be not wholly got rid of, is a very satisfactory attain-

ment. Very probably additional experience may much assist us in the details of this method of treatment, and enable us to secure a greater proportion of cures. In most cases we believe it has been the practice to employ a very dilute tincture, and in large quantities; but it may be fairly open to question whether this is the best. In a case recently treated by Dr. Ramskill and Mr. Hutchinson, in the Metropolitan Free Hospital, a concentrated solution was employed, and allowed to remain in. The injection was practiced twice, with an interval of about a month; and on each occasion after the cyst had been as completely drained as possible, a scruple of iodine, and half a drachm of iodide of potassium, dissolved in an ounce of water, constituted the injection, and was wholly retained. The reasons which induced Mr. Hutchinson to employ so concentrated a solution, were, first, the belief that what was wanted to prevent resecretion was destruction of the epithelial lining membrane of the cyst by iodic cauterization, and that the stronger the fluid the more certainly would this be effected. Secondly, the hope that so concentrated a solution would be less likely to be absorbed quickly, and might therefore be left in to produce its full effect with greater safety. Thirdly, the consideration that however carefully an ovarian cyst be drained, it is almost impossible to empty it, and that therefore a dilute solution is yet further reduced by a mixture with the remaining fluid. Fourthly, that it is not desirable to introduce so much alcohol into the system as is contained in from half a pint to a pint of tincture. With regard to the results in this case we may state that on neither occasion did any alarming symptoms follow, and that although four months have elapsed since the last injection, the patient remains quite well, no tendency to refill being manifested. Before the treatment tapping had been repeatedly practiced, and was required every six weeks or two months, as the cyst was very large, and refilled very rapidly. The injection treatment is of course applicable only to monocystic cases, and if employed in others might very probably irritate adjacent cysts not injected, and do more harm than good.—*Medical Times and Gazette*, April 12, 1858.

DIVERGENT STRABISMUS.—We adverted a few weeks ago to two cases of divergent strabismus, under Mr. Critchett's care, at the Moorfields Ophthalmic, the subjects of which were a father and daughter. In each the degree of divergence, which was great, was

almost exactly similar. The father had, however, contracted his ; but in the daughter the deformity was congenital. An unfavorable prognosis as to the results of the ordinary operation was, therefore, given by Mr. Critchett in the latter case. The operation was performed on both patients on the same day, and consisted in the division subcutaneously of both external recti. The father's eyes remained perfectly straight afterwards ; but, as had been feared, the girl's were in the course of a fortnight almost as widely divergent as ever. Under these circumstances, Mr. Critchett determined to adopt a procedure for bringing forward the attachments of the internal recti, which we have several times before seen him perform, and which we described in these reports about four years ago. The patient being under chloroform, with scissors and forceps the conjunctiva of the inner side of the globe was divided at about a quarter of an inch distance from the corneal margin, for a length of three-fourths of an inch. The dissection was continued inwards, until the internal rectus and the adjacent facia and cellular tissue having been freely divided, the first third of the inner side of the globe was cleared, and a considerable flap, consisting of muscle, conjunctiva, and intervening cellular tissue turned inwards. Sutures were now passed through the whole of this flap, half an inch from its free margin, and again through the narrow attachment of conjunctiva at the edge of the cornea. A curved portion of the flap (at its deepest part fully the third of an inch wide) was next cut away, and the sutures were then tied across. This had the effect of drawing the eyes very much inwards, giving a very decided internal squint. Three sutures on each side had been employed. When we last saw the patient, there was still a slight degree of internal strabismus ; but as the tendency would no doubt be towards the production of the original divergence, the eyes will, in all probability, be straight in the course of a few months. Even should they not, however, their present condition is very greatly preferable to the state of things before the operation.

This operation* is like many others of those performed on the appendages of the eye, not nearly so difficult to perform as it may, we dare say, strike the unpracticed reader of our description. It is one which can be most confidently recommended for bad cases of divergent squint, whether the result of previous operations or other-

* An account of it is given in Mr. Dixon's admirable work on "Diseases of the Eye." Mr. Dixon warmly recommends it.

wise. Cases of divergence are, we may again remark, attended by infinitely more of disfigurement, and are at the same time far more difficult to remedy than those of convergence. For the latter *sub-conjunctival* myotomy, as practiced at Moorfields, realizes every thing that can be expected of a surgical procedure, and very rarely indeed requires any modification.—*Medical Times and Gazette*, April 12, 1858.

INTERMENT BEFORE DEATH.—A case of restoration to consciousness after burial is recorded by the Austrian journals in the person of a rich manufacturer, named Oppelt, at Rudenberg. He was buried fifteen years ago, and lately, on opening the vault, the lid of the coffin was found forced open, and his skeleton in a sitting posture in a corner of the vault. A government commission has reported on the matter.—*Lancet*, May 22, 1858.

PROFESSOR AGASSIZ.—We are much gratified to learn from the *Courier* that this eminent savan has declined the splendid offer made to him by the Emperor of the French, of the Superintendence of the Garden of Plants, with a salary of twenty-five thousand francs and a seat in the Senate. Prof. AGASSIZ prefers to remain in his adopted country, where he will be employed for some years to come in completing his great work on the natural history of the United States. "The truth is," says the *Courier*, "and we wish the nations of Europe, France included, to understand it, that we do not mean to let Prof. AGASSIZ leave America. We have need of him here, and we love and honor him too much to have him go away from us."—*Boston Med. Jour.*

DEATHS OF EMINENT MEDICAL MEN.—The foreign journals inform us of the recent deaths of several distinguished scientific men. Among them was the celebrated physiologist, Prof. Müller, of Berlin, who died at the early age of 56. Prof. Mauthner, director of the Children's Hospital at Venice, whose writings have occasionally appeared in these pages, is also dead. His papers on the diseases of children, in the *Journal für Kinderkrankheiten* and other periodicals, are extremely valuable.—*Ib.*

DURATION OF LIFE AMONG THE JEWS.—According to the observations of E. Gatters, the duration of life among the Jews is considerably longer than with Christians; even in infancy the mortality of the former is relatively less than among the latter. From his calculations it results that the average length of life is for Israelites, 46.5 years; for Germans, 23.7; for the Croats, 20.2; for the Austrians, 27.5. Gatter attributes this superiority on the part of the Jews, in different climates, entirely to the influence of race, and suggests the advantage of paying attention to the ethnographic element in the etiology of diseases. It is very probable that the cause of the greater longevity of Jews over Christians does not depend wholly on race, as Gatters thinks, but especially, if not entirely, on the fact that the Jews are more wealthy than Christians, and that their hygiene is superior to that of the latter.—*Brown-Sequard's Jour. of Phys.*

REPORT ON THE BREANT PRIZE CONCOURS.—The Committee of the Academy of Sciences of Paris (consisting of MM. Andral, Velpeau, Cloquet, Claude Bernard, and Jobert, with M. Serres as reporter) has just delivered in an elaborate report upon the essays forwarded to compete for the Brèant prize.

In instituting a prize of 100,000 francs to be decreed to the discover of a sovereign remedy for the cholera, M. Brèant, the reporter observes, had in view appealing to the efforts of physicians and philosophers concerning the most terrible epidemic that ravages the human race. Although unacquainted with medical science, his dominant idea evidently was to induce additional investigation into the causes of epidemics in general, and of cholera in particular. He believed that in the present state of science much remained to be discovered in the composition of the air, and the fluids it contains, as well as concerning the animalculæ which, according to him, are dispersed in infinite numbers throughout the atmosphere, and may prove to be the cause, or one of the causes of this cruel disease.

The Section of Medicine and Surgery has believed it necessary to define the terms of the question with some precision, in the present state of medical science. In medicine, in fact, as in the other natural sciences, we only know facts, which we assemble together, in order to judge of their relations, and to submit them to classification. By this procedure we rise to a still more general class of facts,

which we term principles. But these principles are themselves but the formulæ of the facts, they are not causes. It is from having long misunderstood this mental process and the limits of its extent, that our science has become plunged into the labyrinth of the study of the immediate causes of disease, striking out new routes, which seemed to promise an issue, but which always finished by bringing us back to the point whence we started.

The Section of Medicine and Surgery has already pointed out to the Academy that the tendency of the Brèant prize was to lead medicine back to the search for the occult causes of disease—a search that had already impressed a direction so systematically mischievous upon science, until the flame of observation and experience came to enlighten its progress and to circumscribe the space within which it must operate. Nevertheless, keeping rigorously within the limits accessible to observation, physicians have not lost sight of the investigations of Van Helmont and Stahl upon this subject; and in imitation of the latter, and of our own illustrious Lavoisier, they have pursued with great interest physical and chemical investigations on the composition of the air, in order to make application of any discoveries to the recognition and cure of epidemic diseases. While rejecting the ideas of Needham on spontaneous generation, they still pursue studies having for their object the acquisition of a knowledge of the animalculæ and all other organic matters contained in the atmosphere, which can exert any influence on the living economy. It is in this spirit the Section has endeavored to fulfill the duty imposed upon it by the Academy, fully recognizing that the discoveries sought for with such excellent intentions by the testator, are of an extreme difficulty, and consequently will have to wait for a remote realization. It is, indeed, with this suspicion, that M. Brèant has also conceived the idea of instituting an accessory prize of 5,000 francs, being the annual interest of the capital of the larger one, to be decreed as a recompense to the authors of works which have increased our knowledge of the cholera, or of other epidemic diseases. Comprehending both the high mission which has been confided to it, and the wishes of the testator, the Section has demanded that the specific for the cholera, the discovery of which is the object of the concours, shall cure this disease as certainly as cinchona does ague. It also believes that the desire of the testator would be accomplished, if during the search for causes, prophylaxis for the cholera were discovered, as complete as that of vaccination for variola.

From November 20, 1856, the date of the last report, to May 1, 1858, the Academy has received 153 memoirs or communications. Among this large number many contain only suppositions more or less improbable, sometimes accompanied by insignificant observations, and sometimes demanding almost impossible experiments, which the Section is itself expected to institute. Other works of a more commendable character embrace the history of cholera, expand on its etiology, the fixity of its symptoms, and the constancy of the morbid changes it leaves behind it. But they add nothing to what is already known, and contain no result capable of elucidating the therapeutical management of epidemical diseases. A third class of papers relates to the statistics of cholera; but these documents, interesting probably in the localities to which they refer, bear no relation to the questions at issue. Two memoirs alone show that their authors have properly comprehended the nature of the questions put. One by a Russian physician at Smolensk, proposing to treat cholera by variolous inoculation, and the other by Dr. Ayre on the treatment of cholera by calomel. Both memoirs failed in convincing the committee of the reality of their pretensions.

To keep the future candidates within the limits of the conditions under which the prize will be awarded, the Section repeats that in order to carry off the 100,000 franc prize, it will be necessary to discover a remedy which in the immense majority of cases will cure the Asiatic cholera; or to indicate, in an incontrovertible manner, the causes of the cholera, so that by the suppression of these, the disease may be arrested; or, finally, to discover a prophylaxis as certain and as evident as is vaccination in variola.

In order to obtain the annual prize of 5000 francs, it will be necessary to demonstrate by exact processes the existence of matters in the atmosphere capable of playing a part in the production or propagation of epidemic diseases.

In the case of these conditions being not fulfilled with regard to this latter prize, it will be awarded to him who discovers a means of radically curing "dartres," or who can throw new light on their etiology.—*Med. Times and Gaz.*, July 3, 1858.

LONGEVITY OF GRADUATES OF COLLEGES.—Nearly a year ago we published some interesting statistics concerning the duration of life among the graduates of Harvard College, deduced from the compu-

tations of Professor PIERCE. The most striking result was the fact that those graduates were longer-lived than the average of mankind; and the ample materials for the calculation would seem to warrant their being quite reliable. In looking over the necrology of Harvard for the past year, we find a striking confirmation of the results obtained by Mr. Pierce, in the remarkably advanced age of those who died since Commencement Day, 1857. The number of deaths, so far as ascertained, is 30, and the aggregate ages of the deceased amount to 1913 years, giving an average of $63\frac{4}{5}$ years to each person. One graduate died at the age of 93 years; 7 were over 80; 9 between 70 and 80; 2 between 60 and 70; 3 between 50 and 69; 9 were under 50. The age of the youngest was 25.

These results are also confirmed in a striking manner by similar ones obtained from the necrology of Yale College for the past year. The number of graduates of Yale who died during the year, and whose ages are recorded, was 16, and their aggregate ages amount to 2873 years, giving an average of $62\frac{1}{3}$ to each graduate. There were 4 over 80 years; 19 between 70 and 80; 4 between 60 and 70.

There is every reason for supposing that the probable duration of life among the graduates of Yale is equal to that of the graduates of Harvard. As the numbers of the alumni of the two institutions are about the same, the result of computations for that college, similar to those undertaken by Mr. Pierce, would be of great interest and value. If the two sets of calculations were found to agree, the result ought to have the effect of diminishing the premium on the life-insurance of the graduates of literary institutions. We have long been of the opinion that the rates of insurance on the lives of members of the learned professions were too high. Great numbers are deterred by this circumstance from insuring. Now if it could be ascertained that the risk was really less than has hitherto been supposed, the rates might be lowered with the greatest advantage both to the insurance offices and to young men entering the professions. It is notorious that but a very small number of our lawyers, clergymen and physicians earn more than a small competency. Few leave more than a pittance to their families when they are cut off midway in their career, and it would require but a small inducement to make them insure their lives for the benefit of their families. This is especially the case with members of our profession, by far the worst paid of any for the amount of work done, and one in which the incumbent is constantly exposed to disease, and not infrequently to death.

We have not written these remarks with the expectation of influencing the directors of life-insurance companies. Of all the corporations they seem to be the most soul-less. An institution which pays a medical man *one dollar* (when it pays him anything) for an opinion which no lawyer would give under fifty dollars, is not likely to listen to any proposition about reducing its charges, however probable it seems that its earnings would thereby be greatly increased. We merely wish to suggest the feasibility of establishing a new life-insurance office, for literary men, whose rates should be moderate, in proportion to the diminished risk, and whose medical as well as legal opinions should be properly paid for, so that no unsound lives should be insured for want of competent advice. Such an institution would meet with a large patronage from the graduates of our colleges.—*Boston Medical and Surgical Journal*.

BELLADONNA IN INCONTINENCE OF URINE.—We have had occasion lately to see two more cases among Mr. POLLOCK's out-patients at St. George's Hospital, in which belladonna has been administered in incontinence of urine with the same favorable result as we have had so often occasion to notice in former cases. The first patient was a boy aged 10, who had suffered for a long time from incontinence of urine, without any visible cause. All the usual remedies had been tried, but with no good effect. He made water constantly in the daytime, and very frequently at night. He was sounded, but no stone was detected; and the urine, on examination, appeared quite healthy. He was ordered one-twelfth of a grain of extract of belladonna three times a day, and five grains of calomel and scammony twice a week. The belladonna produced an immediate effect, marked improvement being noticed even after the first dose. After rather more than a month's attendance, he was discharged quite cured.

In the other case, the incontinence followed the operation of lithotomy, performed some months ago by Mr. Pollock. Here, also, the same treatment was effectual in relieving the symptoms; but the patient was not quite cured when we last saw him, although there seemed little doubt of his speedy recovery.—*British Medical Journal*, March 27, 1858.

OPERATION FOR STRABISMUS.—Mr. WALTON operated at the Central London Ophthalmic Hospital, on a girl six years old, for single internal squint of the right eye. Mr. Walton proceeded to make the small incision in the conjunctiva, close to the cornea according to his accustomed method, when a peculiar adhesion of this membrane to the eyeball attracted attention. It required unusual care to open it sufficiently, and the preternatural intimacy between the parts was an obstacle to the ready passage of the hook for the securing of the muscle. Mr. Walton showed that there was no external evidence of the existing peculiarity, which should, so soon as detected, make an operator exercise more than ordinary care in his proceedings; and also that in this, and all like instances, it was impracticable to divide the muscle subconjunctivally. He alluded to the uncertainty of this method as devised by M. Guérin, even in ordinary cases. The operation of tenotomy, as practised for distortion in the limbs, was not in like manner applicable to strabismus.

Mr. Walton holds that, in this plan of operating, there is far less disturbance of the appendages of the eye than in any subconjunctival method. All who have seen M. Guérin's method must have been struck with the frequent attempts that are made, whether knife or scissors be used, to divide the muscle, and of the consequent wounding and laceration of the ocular sheath, and the subconjunctival fascia. It is impossible to inflict less injury, and at the same time to operate effectually, than by Mr. Walton's plan. The incision he makes through the conjunctiva is less than that which many of the so-called subconjunctival operations require; and the employment of sutures causes a very rapid union of the small wound.—*British Med. Journal*, March 20, 1858.

HON. WM. ALLEN.—A week or two since we announced the arrival in our city of this gentleman, formerly so conspicuous, and always so able as a statesman. He, among other things we understand, has been circulating here among our *Microscopists*. Who would have supposed that a taste for one of the very severest of the sciences would have been likely to make its appearance in a mind, that, in its early career, had been occupied almost entirely with the various things of Sociology? Such, however, is once in a while the case. Occasionally some of the most eminent of statesmen, such,

for example, as Lord BROUGHAM and others that we might mention, fail to find in politics, or the things more immediately connected with the regulations of society, that which fills up the measure of their desires. Their minds want something tangible—something that, when learned, has not to be unlearned with every revolution in passion—something that is true in time and true all the time. Such a feeling can only be gratified by the works of nature. Here is the inexhaustible field—here are laws that vary never—here, and here only, we obtain the materials for science—*here is Truth*. Is it any wonder, then, that the higher order of intellect of every age and in every country should come to this fountain at last, to slake the thirst for knowledge?

By the way, we have been told, that our city is now the American Athens of Microscopy—more instruments here, and a better acquaintance with them than at any other point this side of the Atlantic. Quite a quantity of preparations, known as “*slides*,” are now being put up here. So we learn.

It looks to us, in the instance before us, that Ex-Senator ALLEN “hath chosen that good part” as an accompaniment of his present agricultural pursuits.—*Capital City Fact*.

NAVAL BOARD.—The Board of Naval Surgeons, recently convened in Philadelphia, have concluded their labors and adjourned. There were twenty-six candidates before the Board, out of whom the following gentlemen were selected, as qualified to perform the duties of Assistant Surgeons in the United States Navy: Drs. Bertollette, of Pennsylvania; Leach, of New Hampshire; Christian, of Virginia; Magee, of Pennsylvania; Gibbs, of New Jersey; Burnett, of Pennsylvania; and King, of Pennsylvania.

[From the Nashville Jour. of Med. and Surg.]

DR. DRAKE.—We copy the following from the pen of the late Dr. Drake for an object. It were strange indeed if we should do so *without* one. Since the death of Dr. Drake, our own great men refer to him as the “illustrious,” while British writers bestow upon him the title of the “American Hippocrates.” The following letter from Cincinnati to his colleagues of Louisville, and intended for the pages of their journal, is not the effervescence of youth, but the

product of a mind that had been maturing for sixty-two years. To those whose tender conscience and tenderer feet force them to shudder at allusions to practices among those whom the world insist upon calling physicians, and thus bring upon themselves suspicion that they have a species of reversionary interest in the respectability of irregularity, and who insist that it is not "dignified" to speak of these things, we beg to commend the following lucubrations of the chief of American Physicians:

CINCINNATI, Sept. 14, 1846.

* * * * *

QUACKERY.

The Queen City seems to have prostituted herself to the foul embraces of empiricism. Behold the gorgeous and glittering TEMPLE OF QUACKERY. On its dome there sports a gigantic black snake, fit emblem of cunning; and a silly coot (still fitter emblem of credulity,) is fluttering into the opening jaws of the wily fascinator. Let us enter the upper halls of the mansion of imposture.

Turn to the east; there is the den of the "*Reformed Medical College of Ohio*," where doctors are manufactured out of the raw material. (N. B. The wool may be either coarse or fine, black, white or gray: the rolls warranted equally good and of the same size.) Now turn to the west; there is the den of the rival "*Eclectic Medical Institute*," whose lathe can turn dunces into doctors, and not destroy the natural grain of the wood! The worthies who labor in these precious establishments agree in one thing only, that of slandering the regular profession; beyond this, they show their impartiality by vilifying, that is, telling the truth on each other. I am meditating a plan by which to give a new impulse to their honorable emulation. It is my good fortune to possess the only copy, in America, of a rare book of 1200 pages, published in London, in 1693, under the following comprehensive title:

"*Sepladium: the Complete English Physician; or, the Druggist's Shop opened. Explicating all the particulars of which medicines at this day are composed and made. Showing their various names and natures, their several virtues, preparations, uses and doses, as they are applicable to the whole art of physic, and containing above six hundred chemical processes. A work of exceeding use to all sorts of men, of what quality or profession soever; the like not hitherto extant. In ten books. BY WILLIAM SALMON, Professor of Physic, near Holborn Bridge, London. Multa multuraque.*"

Now, the possession of this scarce and extraordinary work, by either the Reformed College or the Eclectic Institute, would at once establish its supremacy over the other; and I hereby offer it as a premium to the one which can in the shortest time transform a hostler into a doctor; the prize to be adjudged by a committee of *gentlemen*.

Let us descend to another floor of the temple. Here, in an out-of-the-way corner, is the STEAMERY. But how deserted! Its fires are smouldering, and the distillery, of "No. 6" dribbles only *gutta-tim*; and yet the supply is equal to the demand. Compelling a sick girl to drink a quart of lobelia and then a gill of the tincture of red pepper in a single night, while lying surrounded with ears of boiled corn, and winding up in the morning with a dose of No. 3," is no longer the fashion: such methods of curing an inflammation of the brain or stomach are now condemned by the Court of Empiricism; and it has been discovered that a very different plan should be pursued. Let us enter the magazine where the new munitions are elaborated. But hold! We can't get in! It's a mere closet, with tiny boxes, and pills of the size of a millet seed at the end of a dry summer. A millionth of a grain of the extract of aconitum napellus in each box. A tenth of the ten millionth of a drop of the juice of atropa belladonna in that little vial. One pill in the morning, and one drop of the solution at night! No more steam polypharmacy! No more drenching, stuffing, and pistoning with herbs and roots. *That* was all very *vulgar*—*this* is very *refined*: suited to the character and constitutions of ladies and gentlemen—the learned and intellectual—above all, to the convenience of clergymen and pious ladies—whose pocket magazines will enable them to dispense to the poor, and to such of the rich as may be ashamed to visit the temple of quackery. Thus will the blessings of HOMŒOPATHY, like honey dew, fall equally on the leaves of the towering yellow poplar—*softest* of trees, and the humble elder—*greenest* of shrubs.

But let us pass on to another kennel. Its walls and ceiling and floor are wet and cold; but don't feel afraid to enter. You may have pleurisy, or rheumatism, or consumption; but "never mind"—sit down and receive the cold douche, or lie down and wrap yourself in the cold and dripping sheet. "Steam" and hot "chunks" *used* to be the *proper* remedies, but the college of quacks has made a new degree. In the days of Moliere, it could only transfer the liver from the right side to the left. Send round the book of HYDRO-PATHY. Let your friends be warned against all family physicians—

all regular doctors, with their pedantic prescriptions and long bills! Be equally on your guard against homœopathy. Rely on water only and alone. Nothing can live *without* water—and nothing can die *with it*.

But we must move on to the next kennel, and a very genteel and quiet place it is. Look at the simplicity of its furniture—a chair and a sofa. No steam baths—no cold water baths—no jugs of “No. 6;” not even the miniature vials of homœopathic elixir, are allowed to profane the mysterious dormitory! Its very air is ethereal—its light magnetic, and spiritualities gambol in the beams like gnats in the purple rays of the setting sun. All is intellectual and sublime. But let us come to the work. The necromancer takes his chair; the necromancee her sofa—their eyes meet each other—he darts a magnetic glance—her eyelids fall—a quiver agitates her lips, and she softly reclines, in sleep of body but not of mind. A “change has come o’er the spirit of her dream.” Her soul, disengaged from its frail tenement of clay, explores the caverns of the earth, and the lowest pools of the great deep; descends into hell, then rises to heaven; and bringing tidings from both to him who thus sets her free, is prepared, at his bidding, to enter the foul abodes of disease in the bodies of foul men, inspect the foul organs with prying eyes, and report to her master the hidden cause of every foul infirmity. The patient thus inspected may now be placed under treatment. Put him on the sofa—let the doctor point his finger to the disordered organ—keep quiet till he gives the healing glance, and all will then be well. But we must not linger in this spiritual saloon, when so many *spirituous* kennels remain unexplored in the basement below. See how the *doggeries* arranged around—lighted only by lamps—and labeled over every door “No Admittance.” These are the secret vaults. What odors fill the air. Look at the inscriptions of the different doors: ‘CHALLENGE TO THE WORLD! *Dr. Cullen’s Indian Vegetable Panacea.*’ “THE GREAT MEDICINE OF THE DAY—*Dr. Swayne’s Compound Syrup of Wild Cherry.*” “COONS! COONS! COONS!—*McKeuzie’s Corn Destroyer.*” “ALL OPPOSITION VAIN—*Bristol’s Compound Syrup of Sarsaparilla.*” “GREAT CURE FOR CONSUMPTION—*Dr. Duncan’s Expectorant Remedy.*” “BY THE QUEEN’S PATENT—*Triumphant Success of Buchan’s Hungarian Balsam of Life.*” “NEW DISCOVERY—*Zanone’s Hair Powder.*” “*Jayne’s Life Preservative and Expectorant.*” “FEVER AND AGUE, CHILL FEVER, DUMB AGUE, INTERMITTENT AND REMITTENT FEVERS, AND ALL THE VARIOUS FORMS

OF BILIOUS DISEASES SPEEDILY AND THOROUGHLY CURED, by Dr. Osgood's *Indian Cholagogue*." "SALTER'S GINSENG PANACEA—the great remedy for Coughs, Colds, Influenza, Bronchitis, Asthma, Consumption, Pain in the Side and Breast, and all other Affections of the Lungs." APPROVED BY THE FACULTY OF THREE CONTINENTS." Reference to twenty-seven gentlemen and ladies in Cincinnati, including "DR. DRAKE."

But what means the sign over that retired and central cell? A quill from the wing of a crow—cunningest and blackest of birds! Let us peep through the key-hole. Ah! there sits the scholar of all the subterranean kennels. See how nimbly his fingers move, and look at the sibylline leaves as they fall from his pen—infallible boluses—dulcified panaceas—tasteless catholicons—warranted specifics—renowned, restorative regenerators—reproducers of teeth in old age—universal resuscitators from every kind of apparent death! All attested and dignified by the names of eminent physicians and surgeons, now in their graves—Hunter, Cullen, Buchan, Wistar and Rush. And look at the blank certificates, ready to be filled up with spurious or forged names, by the manufacturers in the surrounding kennels! A discount to those who purchase by the ream; and no additional charge for filling up, to those inventors who do not know how to read and write.

Such, gentlemen, is a hasty sketch of the Temple of Quackery, which graces the Queen City. If its priests who minister at its altar are many, its votaries "may be called legion." They are no longer the uneducated and vulgar, but contrariwise, the cultivated, affluent and refined. In the midst of the attendance of well-qualified and respectable physicians, both gentlemen and ladies have the nostrums of quacks smuggled into their apartments. Invalids have their carriages stopped half a square from the door of an empiric, and sneak to it on foot, least some one (who is perhaps at the same time under the care of another quack) should chance to see them. Many, however, have grown quite shameless, and avow their preference of empiricism over science. Its harvest is undoubtedly very great; for those who follow it grow rich, while many deserving physicians "live but from hand to mouth;" and others, too proud to grapple with knaves and impostors for the patronage of an *enlightened* community, are retiring to the country, and intend to give up physic for farming.

When I began this epistle I thought of some other matters on which I might say a little, but as you are undoubtedly tired, and "so am I," they will be kept back for another letter, till when,

I remain your obedient servant,

DANIEL DRAKE.

COLLODION AS AN ERECTOR OF FLAT, UNDEVELOPED NIPPLES.—

By coating the vicinity of the nipple, in a circle of an inch and a half wide, with collodion, the compression effected during the contraction of this adhesive material, will cause the nipple to be protruded sufficiently to allow of convenient nursing when otherwise it would be entirely impracticable. There should be a space of half an inch of the areola around and near the nipple left uncovered by the collodion. It is well known that if the nipple can be drawn until the tumefaction of the mamma somewhat subsides, there will be no further trouble, and it is believed this simple means will often relieve us of much anxiety upon this score —*E. K., Med. Zeitung, translator for Chicago Med. Jour.*

EXPULSION OF A UTERINE POLYPUS, UNDER THE CONJOINT INFLUENCE OF ERGOT AND BELLADONNA. BY DR. BEZENCENET.—

After the author had given ergot to expel a polypus which appeared at the os uteri, with no other effect than pain and a closure of the mouth of the womb on its contents, he gave an injection per vaginum of the infusion of belladonna, so as to bathe the os in that fluid pretty thoroughly. After this, with the continued use of the secale, he had the satisfaction of seeing on the second day the polypus completely expelled from the uterine cavity. Dr. Beck has also seen the same result follow from these means in one case.—*Schmidt's Jahrbucher, Ibid.*

UNIVERSITY OF LOUISVILLE.—This excellent Institution which a year ago had the misfortune to lose its edifice by fire, with an energy truly surprising and highly commendable in its Faculty, was able to gather the same season, quite a large class. The following changes have occurred in its Faculty: Prof. Benjamin R. Palmer has been transferred from the chair of Anatomy, so long and so ably filled by him, to that of the Principles and Practice of Surgery;

and Prof. J. B. Flint, the former Professor of Surgery, occupies the newly created chair of *Clinical Surgery*, while the chair of Anatomy thus vacated is filled by the election of Dr. J. W. Benson. Prof. Henry Miller having resigned the chair of Obstetrics, his place has been judiciously supplied by the election of Dr. Llewellyn Powell.

Dr. S. M. Bemis, favorably known to the profession by his contributions to the American Medical Association, has been elected to the chair of Clinical Medicine.

The other members of the Faculty occupy their old positions, viz., Prof. T. S. Bell, Theory and Practice; Prof. L. P. Yandell, Physiology and Pathological Anatomy; Prof. Robert J. Breckenridge, Therapeutics and Materia Medica; and Prof. J. L. Smith, Chemistry and Toxicology. With the above excellent organization, the University may reasonably expect the same distinguished success in her new edifice, which marked her progress in the old.—*Southern Med. and Sur. Jour.*

THE PRACTICE OF MEDICINE IN THE NINETEENTH CENTURY.—

The practice of medicine in the nineteenth century is a vastly different thing from what it used to be; and the same is true of it in this particular part of the century, as compared with its earlier periods. Although still an imperfect system, the science has, of late years, grown with a rapidity which has astonished its cultivators, while it has immeasurably benefited humanity. Studies, pushed in every direction which could at all enlarge its domain, have been rewarded in a manner corresponding with the unflagging zeal which instituted and still continues to prosecute them. No longer a routine system, the elements of sound common sense and the revolution of Nature's *arcana*, illustrated and applied by Art, have revolutionized the healing of "the ills which flesh is heir to"; and, in many almost desperate cases, the patient survives by the aid of the physician or surgeon, through the blessing of Providence upon their efforts, whereas it was at one time by no means a slanderous accusation to intimate that he lived in spite of them, or even died by their hands!

If there are many discreditable persons who *profess* to practice medicine, and thus injure honest physicians in the estimation of the community—too often not disposed, even when they easily might,

to take the time necessary to discriminate between truth and falsehood in respect to remedial measures, and those who apply them—let us not flag nor be discouraged. Let us rather look all the more frequently to the bright examples and dignified bearing of the revered representatives of the profession who have passed away, and with ever increasing regard upon those who are still with us ; and seek to bind together the whole band of good and true men as they don their armor, honoring and cherishing all such until they put it off forever.

* * * * *

We lately met with some sentiments *appropos* to this subject in a volume by Henry Morley, Esq., the matter of which was originally published in "Household Words." We wish many of them could be made literally to take the position and have the influence that title implies. We present a few, in illustration.

"The studies connected with the practice of medicine have so much in them of truth and vitality, of real and deep philosophy, that it is impossible for them not more or less to enlarge, strengthen, and at the same time refine the mind." * * * "I have very good reason to know that the profession would shine more than it does, if public ignorance did not eat into it like a rust." * * * "Ladies and gentlemen, you will certainly benefit yourselves, if, when you select your own attendants from the coming race of medical practitioners, you look less to tact and exterior manner, and institute a strict search after skill and merit. Attend, I entreat you, less to the recommendation of your nurses and your neighbors, and prefer rather physicians who have obtained honor among men really qualified to pass a verdict upon their attainments." * * * "Most of the really first-rate medical practitioners, indeed, who have obtained large practices, had manner as well as matter in them, tact as well as talent." * * * "I think there would be more study among pupils, and a great deal less that is disreputable among the practices of surgeons and physicians, if we all knew that the public took some pains to judge us on our own respective merits." So do we.—*Boston Med. and Sur. Jour.*

CHLORATE OF SODA AS A SUBSTITUTE FOR CHLORATE OF POTASH.—M. Gueneau de Mussy states, in the *Revue Medicale*, that, struck by the solubility of chlorate of potash, he substituted chlorate of soda

for it, as the latter salt is much more soluble than the former. The taste of the chlorate of soda is, besides, less disagreeable than that of the other salt, and can also be given in a small quantity of vehicle. M. de Mussy has given the chlorate of soda in several cases of diphtheria with uniform success.—*London Lancet*.

OBITUARY RECORD.—24th April, after a protracted illness, WILLIAM GREGORY, Professor of Chemistry in the University of Edinburgh. He was the son of the celebrated James Gregory, formerly Professor of Medicine in the same university. He was an able and accomplished chemist, and a favorite pupil of Liebig.

—Died, in Dublin, on the 23d April, 1858, of apoplexy, in the 63d year of his age, ROBERT HARRISON, late Professor of Anatomy in Trinity College, and well known as an able teacher and as the author of the *Dublin Dissector*.

—At Vienna, of meningitis, in the prime of life, Prof. MAUTHNER, Director of the St. Anne's Hospital, and a principal to the *Journal für Kinderkrankheiten*.

—Suddenly, at Berlin, on the 28th of April, JOHANNES MULLER, Professor of Physiology and Anatomy.—*Med. News*.

R U P T U R E .

MARSH'S NEW PATENT RADICAL CURE TRUSS

Will cure nine cases out of ten of all reducible Hernia (or Rupture), when properly applied and our directions followed. We have the privilege of referring to Profs. VALENTINE MOTT and WILLARD PARKER, of New York; Profs. R. D. MUSSEY, GEO. C. BLACKMAN, J. P. JUDKINS, Dr. W. H. MUSSEY, and other surgeons of Cincinnati. We also have the privilege of referring to many persons residing in Cincinnati, as well as in New York, who have been cured by the use of this Truss. It has met the decided approval of the entire Medical and Surgical Profession who have examined it. We also manufacture and keep for sale,

E L A S T I C S T O C K I N G S ,

for cure of varicose veins; a new style Suspensory Bandage, for treatment of varicocele, hydrocele, etc. Instruments for treatment of Bow Legs, Club Feet, Curvature of Spine, and all other physical deformities.

A B D O M I N A L S U P P O R T E R S ,

Which are worn with much comfort, having no steel springs, yet are perfectly elastic, with shape and pressure graduated to suit the case where required. Also, a general assortment of all other kinds of Trusses, Supporters, and Shoulder Braces, on hand or made to order.

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No. 2.

PART FIRST.

ORIGINAL COMMUNICATIONS.

Removal of a Knife from the left Pleural Cavity, by the exsection of a portion of the sixth rib, and the introduction of the hand.
By J. W. HAMILTON, M. D., Professor of Surgery in Starling Medical College, Physician and Surgeon to the Ohio Penitentiary, &c.

McGinnis, a convict in the Ohio Penitentiary, sentenced by the Hamilton Common Pleas for the term of five years, for manslaughter, was admitted June, '58. From the time of his admission he had a nervous hurriedness about his breathing, and an anxious, forlorn expression of countenance. He was the victim of most persistent melancholia, with occasional delusions. The attention of my assistants was directed to him as a man whose state of mind might at any time lead him to the commission of some desperate act.

On the morning of September 14, at 2 o'clock, I left my residence to attend to a professional call at a distance. On returning at 5½ A. M., I learned that a suicide had been attempted at the Penitentiary, and that a messenger had called for me soon after my leaving. I arrived at the hospital at 6 o'clock. Found the man McGinnis with the right side of his head and face horribly contused, swelled and discolored, the skull being laid bare over the anterior part of the temporal suture, to the extent of the surface of a silver dollar. Three and a half inches above the sternum was an irregular crucial incision. From this a very tortuous wound passed first

outwards, then obliquely downwards and outwards, and finally perpendicularly downwards, so as to perforate the pleural cavity, which the finger could be made, with perfect facility, to enter. On introducing an ordinary steel sound, its own weight was sufficient to carry it to a depth equal to $\frac{2}{3}$ of its length. The examinations were of course made with due guardedness in reference to the admission of air, and the induction of inflammation. They gave no clue as to the presence or absence of a foreign body.

Abundant resonance was elicited on percussing the left thorax. The respirations were accelerated. There was an absence of the vesicular murmur on the left, with puerile respiration on the right side.

I gathered from various sources the following history: At about three o'clock the attention of the hall officer was attracted to the cell of McGinnis by a noise which, on approaching it, he found to be produced by frequent bumps of his head against the stone wall. On entering it, he was found in the condition above described. Only a few ounces of blood had escaped, and this was mainly from the wound in the temporal region. He was at once carried to the Hospital. One of his first remarks on seeing the attendants was, that he had "swallowed a knife," and wished to know if it could be extracted. His pulse at this time, although he was much excited, was less than 100 per minute. Left hospital, giving directions for a minute search in bed, cell, hall, &c., for knife.

Returned at 9 A. M., with Drs. Eels and Drury. Officer had instituted the most thorough search for the missing implement, without finding it. McGinnis now varied his statement, denying that he had "swallowed" it, and saying that he had stuck it in a crevice in his cell. Another fruitless search was made, on returning from which we had a revamping of the whole affair. He now said that he threw it through his latticed cell door into the general hall. Through this hall hundreds of men had passed, and it had been swept, all without giving the least clue to the missing implement.

Various efforts were made to get some idea of the kind of weapon from the patient himself. Many kinds of knives were brought before him, and he interrogated as to the resemblance. He simply indicated, by shaking his head, that it was not like any of them. To add to our embarrassment, he remarked once or twice that he did not know where it was.

The view which I took of the case at this stage was as follows:

That if any of his statements were to be regarded, it was the first : not that he had swallowed the knife, but that it had passed down through the opening into the thorax. This view I rested upon the fact that it was his first statement of the case, and that he manifested no disposition to modify it until he evidently inferred that we were disposed to predicate operative procedures upon it. Besides, on this supposition only, could we come to any rational conclusion as to its whereabouts. Furthermore, we could get no trace whatever of wound of lung, empyema, or hæmato-thorax. Hence I supposed that it was quite certain, not only that it had entered the thorax, but that it had done so in such manner as to induce collapse of the lung, without either wound or hemorrhage, that accordingly it must lie loose in the pleural cavity. Supposing furthermore that the knife, of whatever pattern, had a point and edge, it must inevitably produce a fatal result within a short time.

Accordingly, as the original wound would not admit of enlargement, and was so tortuous as to forbid the use of instruments, it was proposed to undertake its removal by carrying the hand into the thorax, but as one of the medical gentlemen, who was experienced in the tricks of the insane, still thought it probable that it had been disposed of in some other way, it was postponed, to give further opportunities for investigation.

3 o'clock, P. M. Saw the patient, in connection with Drs. Sacsche, J. B. Thompson, and Drury. Nothing new elicited in regard to the foreign body. These gentlemen concurred in the propriety of an operation, but it was reluctantly deferred for the purpose of quieting the patient by the use of venesection and opium. Pulse 138 per minute, respiration hurried, surface blue.

Sept. 15, 9 A. M. Present Drs. J. B. Thompson, Sacsche, Gay, Möeller, Patterson, and Drury. Pulse 155, feeble, irregular; sufferign extreme. Gave at once Brandy ʒiii. and Laudanum ʒi. in hot tea. In this desperate extremity an operation was undertaken at 10½ o'clock, every gentleman present heartily concurring.

Chloroform being given, and the room at a temperature of 75° , a flap was made dissecting down and reflecting back everything external to the ribs, so as to expose the sixth and seventh for about five inches. The anterior termination of the point of exposure was just at the junction of these ribs with their cartilages. On reaching the rib it was my intention to divide its periosteum by cutting down firmly upon the bone and making the attempt, after the manner of

Maissoineuve's operation on the lower jaw, to reflect the periosteum and pleura from it without dividing the latter. The outer surface was cleared without difficulty, but as I was effecting the separation along the attachment of the internal intercostal muscle, a laceration of the pleura occurred, upon which I abandoned this part of my plan, and proceeded at once to divide the rib by inserting one blade of the common bone pliers in the sixth intercostal space and cutting the sixth rib. A similar operation further back removed a piece of appropriate length. This done, and my left hand dipped in water of elevated temperature, it was inserted into the opening and carried forward towards the sternum till the ends of the fingers reached the mediastinum and hurriedly explored the anterior aspect of the root of the lung. Getting no trace of the object of my search, the hand was dropped to the diaphragm, which being hurriedly explored without success, it was thrown upon the posterior aspect of the root of the lung, where almost the first object I touched was the knife, lying beside the spine in an antero-posterior direction. It was at once withdrawn and the wound closed with nine stitches, adhesive plaster, a large compress of lint, and a bandage. Jugs containing hot water were freely used about the extremities; brandy and laudanum with hot drinks were administered, and the room kept at a rather high temperature.

P. M., 2½ o'clock. Pulse 142, regular; patient more comfortable. Ordered beef tea, opium, brandy, &c.

7 o'clock, P. M. Pulse 138, regular, full. Patient quite comfortable. Continued last prescription.

Sept. 16, 8 o'clock, A. M. Learned that through the entire night the patient manifested a most desperate determination to thwart all our efforts in his behalf. Kicked the iron footboard of his bed all night, refused to swallow either drinks or medicines, and resisted to the utmost the forcible attempts of the attendants. Respiration, 22 per minute; pulse 140, feeble, irregular; extremities cold. Introduced a quantity of beef tea, &c., through nostril, after making a most unsatisfactory attempt to force his mouth open with the end of a long flat file. Died at 12 o'clock, M.

Autopsy, five hours after death. Wound on the side perfectly dry, there not being the slightest sign of the entrance of air or the escape of fluids. The dura mater opposite to the left temporal region was found red and thickened to several times its ordinary character, in a circle two-thirds of an inch in diameter. It was highly organ-

ized, and was supposed to have been of some months standing. With this exception the meninges and brain were healthy, except at the base, where numerous coagula were found within the dura mater. The skull was not fractured.

WOUND IN NECK.—In a strait position of the head and neck, this was three and a half inches above the sternum in the median line. It was an inch and a half long perpendicularly, and three-fourths of an inch long horizontally, extending farthest from the median line on the left side. It presented no sign of healing. It passed through skin and superficial fascia, then passed outwards under the sterno-cleido-mastoid, the sterno-hyoid and sterno-thyroid, thus reaching the sheath of the great cervical vessels and nerve. Perforating this, it passed perpendicularly downwards, between the carotid artery and jugular vein without wounding either. Passing anterior to the subclavian artery, it perforated the pleura in close connection with the pneumogastric nerve.

THORACIC CAVITY.—Here we found pretty extensive signs of inflammation. Abundant tender shreds of lymph overspread both costal and pulmonary pleura. The pleural cavity contained a few ounces of serum, deeply colored with blood. The lung was collapsed so as to occupy about half its cavity. The anterior portion of its parenchyma presented but very slight traces of inflammation. The posterior and superior portion, including most of the upper, with a small part of the lower lobe, was suffused with bloody lymph, sufficiently to produce slight solidification. All this part of the lung was deeply discolored. The right lung was perfectly healthy.

The broad extremity of the knife, as shown by the examination had rested upon and lacerated the pleura covering the sixth rib, near its neck, while the smaller extremity was separated from the pericardium by the reflection of the pleura entering into the constitution of the root of the lung. Both these points were the seats of intense inflammation.

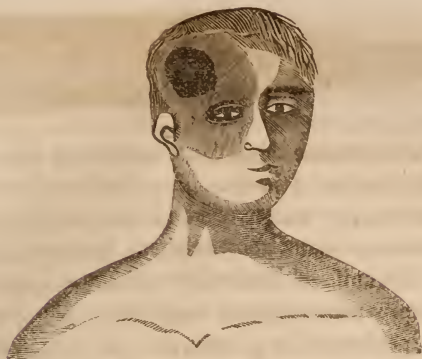
It will be observed that in our description of the operation, we make no allusion to the intercostal arteries. Those above were not touched, and hence require no further mention. Those associated with the divided sixth rib were cut by being pressed down upon the rib with the bone pliers, and thus separated *ecraseur* like. The result was, that we had no hemorrhage. The operation was planned with reference to its avoidance, it being deemed of the first impor-

tance to have the pleural cavity exposed for as brief a period as possible.

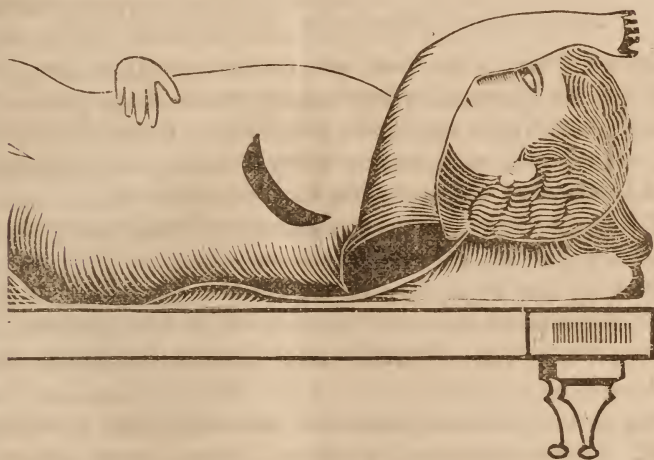
It would be difficult for one who has not carefully contemplated the subject to imagine the facility with which the exploratory part of the operation was effected. As soon as the rib was removed, the air entering the chest, the lung was compressed into a rounded mass, of considerable density, leaving a clear space all around the ribs and over the diaphragm. As the tips of the fingers explored the anterior aspect of the root of the lung, the heart, apparently thrown anterior to the mass of compressed lung, played distinctly and vigorously on the palm of the hand,—perhaps *the first time the living, pulsating, human heart was ever grasped by the human hand.*

We are far from supposing that the state of the chest was the sole cause of death. Had there been co-operation on the part of the patient, and no complication, we were not able to see why the patient might not have lived much longer or even recovered. In fact the coagula at the base of the brain were in such abundance as would seem to be incompatible with life, although the attendant symptoms did not indicate this as the sole cause of death. Death at that particular time was evidently caused by the perversity of the patient. His condition was eminently such as to require quiet, opiates, stimulants and nourishment. After an excellent reaction had been secured by their use, a fatal prostration was induced by his exhausting persistent struggles and his determined rejection of the only means by which it could be averted.

My assistant in the hospital, a man of genius and a most faithful fellow, prepared the following wood cuts. With the assistance of a fellow prisoner of equal ingenuity, he first of all, with very poor facilities constructed a few rude instruments with which he made this, his second attempt, at wood engraving. A little attention to them will make plain much that may seem obscure in the foregoing.



In this cut the situation and character of the wound on the neck is shown, as also the wound in the temporal region, and the swelled and di-colored condition of the side of the head and face.



The above represents the direction situation and character of the incision and flap by which the rib was exposed, the position in which the arm was held, &c.



This represents the piece of rib removed, full size. It is $3\frac{5}{8}$ inches in length. The opening was amply sufficient for a large hand.



The last cut represents the knife, shortened $\frac{1}{4}$ inch. It is a sorry thing for an implement of death. The slender end was intended evidently to be driven into a piece of wood for a handle. It is 4 inches in length and is almost without point or edge. The back is of considerable thickness. This knife of itself affords abundant ground of suspicion in regard to the patient's mental condition. The broad end having been made to perforate the pleura, and air once admitted into the pleural cavity, it is very easy to see that it is well adapted to falling into the cavity.

Addendum to Gilpin's case of Nervous Disease.

Messrs Editors :—As some who read my report in your Sept. issue may be interested in learning the sequel of the case, I will briefly say that, after wearing the seton for three months, it was taken out, and the tonic and alterative course that had been persistently tried for the same length of time, was also abandoned.

The metallic taste from the strychnine had come to be much the same as when I was salivated by arsenic.

From the date of my report, till the first of Sept., there was great tenderness of the sciatic nerve, as well as acute, pricking pain in the whole limb. Otherwise, my general health was fully established.

August 10th.—*Actea Racemosa* in maximum doses, three times daily. In this connection, I wish to ask if there is not a fault in the preparation of this article, as recommended in our works on *Materia Medica*?

Decoction and tincture, are the modes spoken of by those who have written on the subject. Both of these preparations I have used in my own case, and prescribed them for others, but did not obtain the effect that is conceded appertains to the use of this medicine. Afterwards I tried the *infusion* of the root, and obtained the effects, fully, that are ascribed to it by writers on this article.

Differing only in the above respect, the formula of the U. S. Dispensatory was followed, using the recent root. Externally, "firing" the limb over the track of the nerve every alternate morning, as de-

scribed by Dr. Corrigan, in London Lancet, Dec. 5th, 1846, p. 612 or in Braithwaite, Part 13, Jan. to July, 1846, p. 55; also, Part 15, Jan. to July, 1847, p. 82. Any who are curious to see the instantaneous relief and asserted cures said to have been wrought by this novel mode of treatment, are requested to refer to the above named works.

The sensation of cold along the course of the affected nerve was so great that, the most apt illustration I can use, is, it seemed as if a *bar of cold iron* was laid directly on the part, producing that *aching pain* which we all have experienced in other parts of the body, from the same cause.

Warm baths were tried; but the heat that other parts of the body could tolerate was not sufficient to relieve the above described feeling in this limb.

Indeed, I had to abandon this mode of treatment, as it invariably made the limb more painful, and instead thereof use topical warmth. No application was so grateful to the limb as *boiling-hot camphor spirits*—especially over the course of the nerve, conjoined with brisk friction at the time. This plan is still followed every night, and then envelop the limb in flannel.

For the last few days the spastic contractions of the nerve have mostly subsided, with a decided abatement of the tenderness, and the prospects are hopeful that I shall ultimately regain my health.

Appetite is good; secretions and excretions natural and regular; and have regained my usual weight. Functional disturbance of the brain continues; *muscae volitantes* constant; sometimes quite impairing vision—being like a thick cloud of smoke.

Brilliant scintillations have been quite frequent ever since the crisis in my disease occurred. When reading or writing vision is, momentarily, wholly impaired by their resplendence. By day or by night, in sunlight or in darkness, the flashes of light are equally constant and dazzling.

I am now able to use the limb to some extent, without much increase of pain.

Spinal tenderness, though not wholly absent, is comparatively slight.

LEMAN GALPIN, M.D.

Milan, Ohio, Oct. 21st., 1858.

Poisoning by Strychnine.

Drs. Dawson and Hamilton.—As recoveries after having taken strychnine in poisonous doses have not been very frequent, and anything calculated to throw light upon the treatment of such cases interesting, I am induced to make the following report of a case which recently came under my care.

I was summoned in great haste to see a female, one square distant from my office, who was stated to be laboring under convulsions. Whilst passing up to the third story of the building, the lady of the house informed me that the patient was a stranger—had been in her house one week—came with a man who represented himself as her husband—that the man had left on the same day and not been heard of since—that she had informed the woman on that morning she could not keep her any longer—that after a short absence from the house, she had returned and was suddenly taken violently ill, and suggested the idea of her having taken something.

When I entered the room she was lying full length, prone, upon the floor; her breathing was hurried; pulse natural; intelligence perfect. Asked her what was the matter; her only reply to all my questions was, that she was dying, she knew she was. Smelt her breath; could perceive no odor upon it—had partially come to the conclusion she was shamming—when instantly she went into a most frightful convulsion; the head and neck bent backwards to the fullest extent—the arms and legs became rigid, the face livid, and the whole frame thrown into a quick, vibratile motion, resembling the action of galvanism. This spasmodic action lasted from ten to twenty seconds, when it gradually relaxed, and she could again converse as usual. The symptoms at once suggested the action of strychnine; and on being further interrogated, she admitted she had, about half an hour previously, taken some. Leaving for a few minutes, I went to my office and procured six 5 grain doses pulv. camphor, and as soon as I returned, gave her two of them at once, in a teaspoonful spirits of camphor. She at first refused taking it, saying she could not swallow, and that she did not wish to live anyhow, but afterwards got it down without much difficulty. She had another spasm during my absence, and three more after my return, one severe one which came on whilst removing her from the floor to the bed. Gave her 5 grs. pulv. camphor every 10 minutes, and administered chloroform in the mean time. In half an hour from the first dose the spasms ceased to return.

In endeavoring to elicit from her the quantity she had taken, and where she had procured it, we ascertained she had not taken the whole amount purchased, and on examination, found the remainder on the stand, done up and marked "strychnine poison." Anxious still to ascertain how much she had taken, I went to the drug-store at which she had obtained it, and upon showing it to the clerk, he recognized at once the parcel; said he had sold it to a woman that morning, giving her *three grains* by weight, telling her when doing so, there was enough to kill half a dozen men. Upon weighing the remaining portion on the same scales there was found to be exactly *two grains*. Subsequently to her recovery I learned from her that she had, upon returning to her room, opened the paper, and poured the poison on her tongue, washing it down with water; so there can be very little doubt as to her having swallowed one grain.

I have observed the operation of strychnine on animals, when given in various amounts, and am satisfied the symptoms could have originated from no other source; had she been perfectly acquainted with the pathogmetic effects of the drug, she could not, nor could any other person voluntarily execute the series of muscular contraction she exhibited.

Now the simple matter of fact questions, did this woman swallow one grain crystalized strychnine, and survive the effects; and if so, what amount of influence had the camphor in bringing about this favorable result? are questions of no small interest, and practical importance.

I have given an exact and truthful statement of all the circumstances, adding nothing, suppressing nothing of importance, and taking all together, there does not seem any good reason to doubt her statement, so strongly corroborated by the facts.

I do not claim of course, any originality in the administration of either chloroform or camphor. You will find the following in the synopsis of Brath. Ret. page 342: "Give 2 grains pulv. camphor with half a teaspoonful of spirits of camphor every fourth of an hour; if necessary, a little morphine may be added."

"Dr. Pritchard reports a case in which three 5 grain lumps of camphor were successfully administered. Emetic, and the stomach pump were employed, and artificial respiration by Dr. Hall's ready method was necessary at one part of the tetanic spasms. Towards the decline of the tetanic movements, which lasted about 20 minutes, the camphor was combined with opium."

Respectfully yours,
Columbus, August 27, 1858.

ROBT. M. DENIG, M.D.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Memoir on the Use of Metallic Sutures and Metallic Ligatures in Surgical Wounds and Operations. By J. Y. SIMPSON, M. D., Professor of Medicine and Midwifery in the University of Edinburgh.

Part II. *Relation of Living Structures to Metallic and Organic Foreign Bodies.*—In pursuing the study of metallic as compared with organic surgical threads, there are two general laws in surgical pathology which it seems necessary to consider before we can fully understand the relative advantages and disadvantages of these two forms of surgical sutures or ligatures. The two laws to which I allude have hitherto attracted very little attention from surgeons. They refer to the comparative passiveness of living tissues to the presence and contact of metallic materials, and their excitability and irritation, on the other hand, under the presence and contact of foreign organic bodies derived from the vegetable or animal kingdoms.

Law of Tolerance of Living Structures for the Presence of Foreign Metallic Bodies.—Metallic bodies when lodged and imbedded without much mechanical contusion or injury in living tissues, produce comparatively little or no irritation by their presence; and if inflammation is excited by their contact, that inflammation is usually limited to the first or adhesive stage, and does not progress onward to the higher stages or terminations of suppuration and ulceration.

In corroboration of this important general law, let me adduce some individual instances in evidence.

In the lower animals, when a portion of metal is placed in the subcutaneous tissues, and the external wound is closed over it, the foreign body becomes imbedded and fixed in its site, without leading to the production of suppuration and ulceration in the tissues in contact with it. With a view of testing this fact, I had placed deeply in the back and sides of a pig, small pieces of gold, silver, copper, lead and iron. We found no pus effused around these metallic bodies, when the wounds were opened and carefully examined six days subsequently. Around the pieces of gold, lead and copper, there was a thickish layer of coagulable lymph or fibrin, making as it were a complete cast of the foreign body; but showing under the microscope nothing but exudation corpuscles, and granules. Around the pieces of silver and iron there was no such distinct appearance of an incipient cyst;* for the portions of metal seemed to be closely

*In a later experiment I have seen a cyst formed around an angulated piece of bright steel.

embraced by the surrounding tissues, with little or no adhesive exudation between their contiguous surfaces. In some experiments which Mr. Syme made several years ago upon the dog, with the view of ascertaining whether or not the periosteum could throw out bone upon its internal surface, he introduced between the radius and its periosteum a thin plate of metal, using, I believe, lead for the purpose; and the superficial parts were found to heal "kindly" over and around this foreign body, apparently without any tendency whatever to suppuration or ulceration. * * * He exposed the radius in another experiment, cut away the periosteum, and surrounded the denuded bone with a piece of metal. At the end of six weeks he found a thick, rough capsule formed, inclosing the metallic plate.*

But the law holds equally good, that metallic bodies may be lodged within the living tissues of the human body without creating any considerable amount of irritative reaction.

It is a well-known fact in military surgery that in gunshot wounds, after the immediate effects, in the way of contusion and injury, resulting from the mechanical force of the ball, have passed away, the metallic ball itself may lodge in the tissues of the body for months or years with impunity; more especially if the internal vital organs are not touched by it †

Since commencing these inquiries I have had reported to me, by my medical and other friends, several instances in which bullets have remained lodged within the bodies of officers and soldiers still living, and who received them at Waterloo and in the Peninsular War, forty years ago and upwards. One of the oldest and greatest military surgeons, Ambrose Paré, when speaking on this subject, remarks: "Leaden bullets (says he) lie in some parts of the body some whiles seaven, eight, or more yeares, so that they neither hinder the agglutination of the wound, neither doth any other symptome happen thereupon, as I have diverse times observed; until at length by the strength of nature forcing them, and their proper weightines bearing them downewards, they shew themselves in some lower part, by their swelling or bunching forth, so that they must be taken forth by the hand of the Chirurgion. For they say Lead hath a certain sympathy and familiarity with man's body, chiefly the fleshy parts thereof. Wherefore it neither putrifies itself nor causeth the flesh to putrefie; besides it hath an excellent faculty in cicatrizing old ulcers."‡

To the same effect in his essay on gunshot wounds, the celebrated John Hunter, when speaking of the practice of leaving the ball, and not dilating the gunshot wound on that account observes, "This practice has arisen from experience; for it was found that balls, when obliged to be left, seldom or ever did any harm when at rest,

*Transactions of the Royal Society of Edinburgh for 1840, vol. xiv. p. 162.

†Sometimes, however, "balls (observed Professor Traill) have been lodged in various parts of the body, even the chest, or the heart itself, for years, without causing death."—*Outlines of Medical Jurisprudence*, p. 87.

‡English edition of Ambrose Pare's Works, p. 429.

and when not in a vital part; for balls have been known to lie in the body for years, and are often never found at all, and yet the person has found no inconvenience. This knowledge of the want of power in balls to promote inflammation when left in the body arose from the difficulty of finding them, or extracting them when found, and therefore in many cases they were obliged to leave them.”*

It would be easy to adduce evidence of the same kind from the works of other and later military surgeons, as John Bell,† Guthrie,‡ B. Cooper,§ etc., but additional proof is perhaps superfluous, as the fact is one generally acknowledged in Surgical Pathology.

Seeing thus that musket balls may remain lodged without irritation or inconvenience, in contact with the structures of the living body, it is scarcely necessary to add—what the experience of almost every surgeon can corroborate—that leaden pellets and small shot do often in the same way lie imbedded for years beneath the skin, or more deeply in the living structures.

In these cases of leaden bullets and pellets lodged for any length of time, the surrounding soft tissues, or a special cyst, embrace and hold firm the enclosed foreign body. “When (observes Mr. Guthrie),|| a ball has been lodged for years, a membranous kind of sac is formed around it, which shuts it in, as it were, from all communication with the surrounding parts. If it should become necessary to extract a ball which has been lodged in this manner, the membranous sac will often be found to adhere so strongly to the ball that it cannot be got out without great difficulty, and sometimes not without cutting out a portion of the adhering sac.”

In an old patient, who had been affected more than once with syphilis, Morgagni found on dissection a leaden pistol-bullet, which had been lodged in his thigh thirty years before death. “There was,” he adds, “a cyst or membranous follicle about that bullet, with which it was straitly inclosed all around.”**

Flat pieces of lead may lie embedded in the tissues of the human body, with apparently similar impunity to round bullets and pellets. Mr. Samuel Cooper quotes a remarkable example of this kind from M. Bordier, that happened at Pondicherry: “An Indian soldier (says Mr. Cooper), angry with his wife, killed her and attempted to

*Hunter’s Works, by Palmer, vol. iii. p. 555.

†Discourse on the Nature and Cure of Wounds, p. 206. “A ball (says Mr. Bell) often lies without danger buried in the flesh for years or for life.”

‡Treatise on Gunshot Wounds, 1820. “When (Mr. Guthrie remarks) a ball has been lodged for years, we find that a membranous kind of sac is formed around it, which shuts it in as it were from all communication with the surrounding parts, and in some instances it seems to do so, and the patient suffers no sort of inconvenience from its retention.”—P. 96.

§Principles and Practice of Surgery, p. 28. “It is not (Mr. Cooper observes) a matter of much importance as might be supposed, that the ball should be extracted, as there are very many instances of persons in whom a ball has remained without producing any ill effect by its presence.”

||Commentaries on the Surgery of the War, etc., 1853, p. 34.

**Seats and Causes of Diseases (Alexander’s Translation), vol. i. p. 862.

destroy himself, by giving himself a wound with a broad kind of dagger in the abdomen, so as to cause a protrusion of the bowels. A doctor of the country being sent for, dissected between the muscles and skin, and introduced a thin piece of lead, which kept up the bowels. The wound soon healed up, the lead having produced no inconvenience. The man was afterwards hanged, and M. Bordier when the body was opened, assured himself more particularly of the fact.”*

The instances I have cited refer only to lead, or lead and some of its alloys, lying in contact with the living tissues. And some authors, indeed, imagine that this negative property of harmlessness belongs, among the metals, to lead alone. “Bullets of stone (remarks Ambrose Parè),† iron, and of any other metal than lead, are of another nature, for they cannot remain any long time in the body without hurt; for iron will grow rusty, and so corrode the neighboring bodies, and bring other malignant symptoms.” But the evidence of other metals remaining harmlessly embedded in living tissues, or passing harmlessly through them, is equally strong. Needles, for example, may, as is well known to surgeons, long remain embedded in the living tissues with little or no inconvenience. Even when they travel about from part to part from pressure of the muscles, etc., acting mechanically on one or other of their extremities, they produce little irritation in the course of their transit.‡

“If foreign bodies (says John Hunter) are such as can be made to change their situation by the action of the body upon them, such as pins or needles, or from gravity, as is the case sometimes with bullets, then the parts through which they pass seem not to be much altered or disturbed.”§

Various other metals, or combinations of metals, besides lead and iron, possess the same negative property of harmlessness; and, indeed, this principle has been taken advantage of in the religious and other rites of some nations. Thus, the Rev. Howard Malcolm, in his account of the religion of the Burmese, states: “Amulets and charms are worn by both sexes, but not by a large number, as among Hindoos. One of these, common among military men, is the insertion of pieces of gold, or other metal, under the skin of the arm, between the elbow and shoulder. I was allowed,” Mr. Malcolm adds, “by one of the Christians at Ava, to take from his arm several of these. They are of gold, inscribed with cabalistic letters.”|| Some of these Burmese warriors are, observes Captain Yule, in his

*Cooper's Surgical Dictionary, p. 611; and Journal de Medecine, vol. xxvi. p. 538.

†English Edition of Pare's Surgery, p. 249.

‡Let me here, though in anticipation of the sequel, state, in answer to various inquiries, that at present I believe that iron wire or iron thread, such as No. 30 of the wire-maker's guage, will be found the cheapest, strongest, and perhaps altogether the best metallic thread, both for surgical sutures and ligatures.

§Hunter's Works, vol. iii. p. 287.

|| Travels in South-Eastern Asia, etc., vol. i. p. 307.

late work on Burmah, said to retain the practice "of inserting a piece of metal under the flesh to make themselves invulnerable."*

Accident is frequently furnishing us with examples of the same law of tolerance of the living tissues for foreign metallic bodies, and that under conditions where two metals are united. For instance, our common tinned iron pins often enough become accidentally lodged in the external tissues of the body, or are swallowed and even traverse different parts of the body without showing much irritation or inflammation along their track. "In the cattle which feed in bleaching fields, there is not (observes Mr. Hunter) one of these killed without having their stomachs, etc., stuffed full of pins, and no seeming inconvenience takes place, for they appear to be healthy, and fatten as readily as other cattle."† Among "the cases that have occurred of persons swallowing pins, needles, etc., they have (says Mr. Hunter) been found to travel almost over the whole body, without producing any effect except in some situations exciting some sensations." Mr. Hunter, in the chapter from which I have made these quotations, is inclined to argue that the same material which will produce little or no irritation, or at the most only adhesive inflammation in the deeper parts of the body, will more and more readily induce suppuration as it approaches the external or cutaneous surface, "external parts (to use his own words) assuming the suppurative inflammation more readily than the internal"—p. 288. Hence he would expect an abscess to form around a bullet, pin, or needle lodged immediately beneath the skin, although the same bodies would excite no such inflammatory reaction when they were lodged in the deeper structures of the body. But suppuration does not by any means always, or indeed frequently attend the approach of metallic bodies to the surface; pins, needles, and bullets are often extracted by a slight incision through the skin, without a vestige of pus being traceable around them; and when they do, as, indeed, sometimes happens, lead to suppuration, when lodged superficially and subcutaneously, the inflammatory or suppurative action is generally, if not always, the result of compression and damage of the soft tissues lying around the foreign body, these soft tissues being, as the foreign body approaches the external surface, always liable to be contused and injured by every form of accidental outward pressure that impinges upon that surface. In fact, in the harmlessness of acupuncture needles, and, latterly, in the perfect innocuousness of metallic stitches, we have abundant evidence that metallic bodies produce, *per se*, as little irritation when lodged in the skin and mucous membrane, as they do when they are lodged in any of the deeper structures of the body. And, no doubt, Mr. Hunter was far more correct when he observed, "It is probable that these cases of pins, etc., owe their want of power in producing suppuration, not entirely to situation, but, in some degree, to the nature of the sub-

* Narrative of the Mission to the Courts of Ava in 1855, p. 203.

† Hunter's Works, vol. iii. p. 282.

stance, METALS, perhaps, not having the power of irritation (inflammation) beyond the adhesive, for when the adhesive has taken place, the part appears to be satisfied.”*

This great and important practical law of the tolerance of living structures for the presence and contact of pure metallic bodies has been fully expressed by an anonymous writer in the *Edinburg Medical and Surgical Journal* for 1827.† The observations which this writer made thirty years ago are so apposite to the present inquiry, that I need make no apology for quoting them in full. “It is a remarkable circumstance (says he) that the acupuncture needles never cause inflammation in their neighborhood. If they are rudely handled, or ruffled by the clothes of the patient, they may produce a little irritation; but if they are properly secured and protected, they may be left in the body for an indefinite length of time, without causing any of the effects which usually arise from the presence of foreign bodies. In one of M. Clocquet’s patients they were left in the temples for eighteen days; and in cases in which needles have been swallowed, they have remained without causing inflammation for a much longer period. It appears probable, from the facts collected on the subject, that metallic bodies may remain imbedded in the animal tissues without being productive of injury; and that the property of irritating and inflaming by mechanical contact belongs only to those bodies which are non-conductors of electricity. But farther experiments are required to substantiate this curious and important law.”

The author of the preceding paragraph, though right in his generalization, is no doubt wrong in his explanation of the facts. Other inorganic bodies, besides the metals, may be lodged with impunity in the living tissues; and this, too, though they are non-conductors of electricity. Small pieces of glass, for example, occasionally remain long imbedded in the body in the same way as pieces of metal do. Mr. Hunter, indeed, points out this fact specially.‡ A medical

* Hunter’s Works by Palmer, vol. iii. p. 283.

† See the Review of the Essays of Clocquet, Sarlandiere, Pelletan, Pouillet, Carraro, and Dantu de Vannes, in the *Edinburg Medical and Surgical Journal*, vol. xxvii. p. 197.

‡ Loc. cit., p. 283. After speaking of “metals perhaps not having the power of irritation beyond the adhesive,” Mr. Hunter observes: “This appears also to be the case with the introduction of glass, even in superficial parts: a piece of glass shall enter the skin just deep enough to bury itself; inflammation shall come on; the wound in the skin, if brought together, shall heal by the first intention; and the inflammation shall not exceed the adhesive, but rather degenerate into the disposition to form a sac, by which means a sac is formed around the glass, and no disturbance is given to the irritability of the parts. This was the case with Mr. Knight, apothecary, who had a piece of glass, three-fourths of an inch long, run into the palm of his hand, and remained there for ten weeks, without any further inconvenience than retarding the motion of the hand, and sometimes giving a pricking pain, when the sac was made to press upon the points of glass; this insensibility, however, arises from a sac being formed with such properties, but it cannot be assigned as a cause in the case of bodies moving with pins.”

friend of mine has a small piece of glass imbedded in his lip, which has remained there with impunity for upwards of twelve years. I have heard of two or three cases of small pieces of glass lying quietly in the structures of the hand for long periods. An eminent surgeon had for twenty or more years a small piece of coal lying without inconvenience beneath the skin of the leg; and the small particles of carbon left by the explosion of gunpowder and by tattooing are well known to remain in the cutaneous tissues for a long lifetime without producing any irritation or disturbance. The Burmese, according to Mr. Malcolm, bury and carry not only gold, but also "sometimes small gems" under the skin of their arms.* In fact, there seems to be a law of tolerance more general than the passiveness of living tissues to the presence in them of metallic bodies; this higher and more comprehensive law apparently being that living structures may endure with impunity the presence of inorganic, and even of dense organic materials, provided they are not porous and capable of absorbing and retaining within them the secretions which are thrown out around them.

Before closing these observations on the tolerance of living tissues for metallic bodies, let me add, that in this as in many other instances, when once a general principle is established, we often find that it will serve us as a clue to the explanation of facts of an equivocal character already alleged, but which from their very strangeness, and previous inexplicability, were still regarded with doubt by some minds. For example, we have already seen that one old mode of attempting the radical cure of inguinal hernia was by the "golden stitch," or by encircling the neck of the hernia sac with a permanent gold wire, which wire was left imbedded in situ, and the wound closed over it. The past history of surgery shows that this practice was followed as far as the safety and life of the patient were concerned, with a degree of frequency and impunity which was startling under our modern pathological ideas of the facility with which injuries and wounds of the peritoneum run on to dangerous degrees of inflammation and death.† In the same way these ideas have again been upset in modern days by the new mode of radical cure for inguinal hernia introduced by Wurtzer, Rothmond, Spencer Wells, and other surgeons, and which essentially consists in infibulating the hernial sac, and placing and keeping for several continuous days a stitch through this inverted portion of the peritoneal sac. We have proof of the innocuousness of this method of operating in the fact that Rothmond has, it appears, practiced the operation now upwards

* Travels in Asia, vol. i. p. 307.

† In describing this old method for the radical cure of hernia, Purmann, for example, remarks, in reference to the frequency and comparative safety of the operation: "The famous and excellent operator at Leyden, Schmaltzius, was so expert at it, that you could not perceive how he performed it without a diligent circumspection; yea, I verily believe, he could have cut fifteen patients in an hour's time, if he had had so many. When I was there, he cut but six in an hour, all which succeeded; but then he took more time than ordinary."—*Chirurgia Curiosa*, Book II., chap. 13, p. 161.

of one thousand times without losing a patient, or seeing one case of fatal peritonitis excited by this prolonged puncture and transfixion of the peritoneum. In all probability the explanation of the comparative safety of both these modes of radical cure of hernia is simply this: The thread or needle used is metallic, and hence, in accordance with the general law which we have been considering, inflammation is excited by the metallic thread or metallic pin only up to the degree or stage of adhesion. If a silken thread is used for the purpose, then, as shown indeed by the result of Gerdy's experience upon the radical cure of inguinal hernia, the same operation comes to be attended by a higher and far more dangerous degree of inflammatory action.*

Law of Non-tolerance of Living Tissues for the Presence of Dead Foreign Organic Bodies.—When dead† organic bodies, belonging either to the animal or vegetable kingdom, are lodged or imbedded in the living tissues, they, as a general law, speedily produce morbid irritation and excitement, and a degree of inflammation which soon terminates in suppuration and ulceration.

In experiments upon the lower animals, pieces of lint-cloth, etc., lodged in the cellular tissue, etc., excite suppurative inflammation, when portions of metal of equal size, lodged in their neighborhood, and at the same depth, excites only adhesive inflammation.

Foreign or dead organic substances are sometimes found lodging in and complicating wounds in the human subject, particularly gunshot wounds.

The walls of a gunshot wound along its tract through the soft tissues of the body, are often to a greater or less extent killed by the force and blow of the ball, and consequently slough. Whenever a portion of soft tissue is in this way deprived of vitality, and becomes a dead organic substance, it excites in the contiguous living structures suppurative and ulcerative inflammation to such a degree as is necessary for the disjunction and elimination of the dead organic tissue.

When any portion of the soft tissue dies or sphacelates from any other cause, mechanical or morbid, it gives rise in the same way for its separation and removal to suppurative and ulcerative inflammation in the contiguous living structures.

The same law holds true in regard to a piece of dead or necrosed bone. Suppurative and ulcerative action is set up in the living tissues around it. When a piece or splinter of bone is struck completely off by a gunshot wound, the lodgment of this separated fragment of bone prevents, sometimes for a long period, the wound from closing, and keeps up constant morbid irritation and suppuration by its presence.

Pieces of cloth are occasionally lodged in the structures of the

* See Mr. Spencer Wells' paper "On the Radical Cure of Inguinal Hernia," in the Dublin Journal of Medical Science, for May, 1858.

† We shall afterwards see that living organic bodies, as imbedded entoza, do not, while living, give rise by their presence to suppurative or ulcerative inflammation.

human body by gunshot wounds, the ball carrying before it and with it portions of dress, etc. The law of the non-tolerance of living tissues for the presence of foreign organic bodies, is strongly illustrated by the irritation and suppuration to which such imbedded portions of cloth give rise. The fact is one well known in military surgery, and is alluded to by various authors. Thus, for example, Mr. John Bell, in his "Discourses upon Wounds," when treating of the circumstances which may impede the healing of a gunshot wound, specially point out, that, as a cause of its slow cure and of its continuous irritation and suppuration, "there may remain some foreign body within the wound ; now," he continues, "a ball *never* produces these ; a broken and corrupted bone would presently be known by the black color and fetid smell of the discharge ; and if the slow healing of the wound is known to proceed from neither of these causes, then most likely it arises from some piece of *cloth* which has passed in along with the ball.*"

In the practice of his profession, the surgeon often takes advantage of the same law ; for when he wishes the sides of any artificial wound or opening which he has made not to adhere, he knows he can effect this purpose by lodging between the walls of the wound a piece of charpie or other foreign body ; and he is further certain, by maintaining the foreign body in this position for a few days, that suppuration in the walls of the wound will be excited by its presence.

A very small and minute fragment of dead animal or vegetable substance is sufficient, in accordance with this law, to excite suppuration in the living tissues among which it is lodged. Several years ago various eminent surgeons tried for a time the practice of cutting off both the ends of the ligatures with which they had tied vessels in amputations and other operations. The quantity of organic ligature required to be thus left buried in the closed wound around each deligated vessel was extremely small.

Mr. Lawrence calculated that the loop of silk thus left around each artery was, perhaps, not heavier than one-fiftieth of a grain ; and the weight of flax or hemp thread required was not much more.† But though this vestige of foreign organic matter is not generally sufficient to prevent the union of the wound by the first intention, yet the practice has latterly been almost entirely given up by surgeons because they found that, as a general law, this minute fragment of organic ligature thus left imbedded in the wound became inclosed in a small abscess, and by its presence gave rise to a slow process of suppuration and ulceration, by which the ligature was ultimately carried out, and discharged from the surface of the

* Discourses on the Nature and Cure of Wounds, p. 203.

† "A portion," says Mr. Lawrence, "sufficient to tie a large artery, when the ends are thus cut off, weighs between 1-50th and 1-60th of a grain ; a similar portion of the thickest kind I have tried weighs 1-20th of a grain, and of the slenderest 1-100th. These ligatures do not interfere with the process of adhesion."—*Medico-Chirurgical Transactions*, vol. vi. p. 103.

body. "By some both ends," says Professor Miller, "are cut away; in the belief that adhesion is thus favored throughout the line of wound, as doubtless it is; and in the hope that the noose will become encysted, and give no further annoyance—as certainly will not happen. Adhesion under such circumstances is a misfortune; for the noose and its contained slough are to all intents and purposes foreign matter; as such their presence will be resented by the surrounding living textures; and as such they will be extruded by suppuration. Sooner or later—often after cure has apparently been completed—deep abscess forms painfully and slowly, having approached the surface, pus is discharged, and with it, its cause, the noose. Not until this latter has been put forth will the pain and discharge cease.*"

Long organic ligatures of silk or thread, thrown around bleeding vessels, and left hanging out of the surgical wounds, keep up in the same manner by their presence and contact a continuous process of suppuration along their tract; and at the point of deligation the tied artery is cut through by ulceration, before the ligature becomes separated and removed.

Organic sutures formed as suture-threads have hitherto been of silk, flax, or hemp, act in accordance with the same general law of the non-tolerance of living tissue for foreign organic substances, and when left for a short time, always at last excite suppuration and ulceration by their presence.

Indeed the common organic sutures hitherto used by surgeons do thus so often prove noxious centres and sources of irritation in the lips of wounds as to have led, repeatedly, in the past history of surgery, to their more or less partial or complete rejection from practice. Above a century ago the published observations of Pibrac and Louis, led for a time, to the almost total discontinuance of sutures in closing and keeping in apposition the lips of wounds, while the same object was attempted to be obtained principally or entirely by the aid of position, plasters, and bandages. The best surgeons of modern times, while returning again to the moderate use of silk and similar sutures, have very generally acknowledged the irritating and unhappy effects occasionally produced by them, particularly when too long detained. Thus the late Professor Samuel Cooper, in the last edition of a work that was long regarded as a standard exposition of English Surgery, remarks, that it must be allowed that the cause of some wounds not uniting, "is entirely ascribable to the irritation occasioned by the sutures themselves."†

"Since (he observes) the sutures *always* act as extraneous bodies in the exciting more or less inflammation and suppuration round them, there can be no doubt that their employment is invariably wrong, whenever the sides of a wound can be maintained in contact by less irritating means, with equal steadiness and security. For

* Miller's Principles of Surgery, p. 362.

† Cooper's Surgical Dictionary, Article "Sutures," p. 1211.

what is it that generally counteracts the wishes of the surgeon, and renders his attempts to make the opposite surfaces of wounds grow together unavailing? Is not the general cause too high a degree of inflammation, which necessarily ends in suppuration? Are not sutures likely to augment inflammation both by the additional wounds of the needles, and the still more pernicious irritation of the threads, which always act as foreign bodies, sometimes producing not merely an increase of the inflammation and suppuration in their tract, but frequently ulceration or sloughing of the parts; and, in particular constitutions, an extensive erysipelatous redness. More wounds are hindered from uniting by sutures than such as are healed by them.”*

Or let me quote on this point the author of the last work on Surgery, published in this country:—

“Sutures (says Professor Pirrie) should not be employed when it is possible to maintain steady apposition without them. During the first day or two, and before they have cut their way by ulceration through the skin, they certainly act more powerfully than plasters in maintaining coaptation—one of the essentials for obtaining adhesion; but they also irritate much more, and, if not speedily removed, excite, at least in their immediate vicinity, sufficient inflammation to lead to ulceration, preparatory to their spontaneous extrusion, and the vascular action thus set up in one part of a wound, may extend so far as materially to interfere with or prevent adhesion. Even under the most favorable circumstances, a slight suppuration seldom fails to follow in the track of each stitch; and though, when the action stops here, the general healing of the wound may not be retarded, still the greater marking of the cicatrix, at each of these points, is an additional reason for avoiding their employment, when possible, especially on exposed parts † Sutures, then (concludes Dr. Pirrie,) are to be employed when there is difficulty in keeping the parts satisfactorily in contact by means of plasters; but they should be as few and far between as consists with the attainment of their immediate object.”

In short, Professor Pirrie, like many other eminent surgeons, holds with Mr. Hunter, that plasters have an advantage over stitches, by not inflaming the parts over which they are applied; “and (to use Mr. Hunter’s own words) by neither producing in them suppuration or ulceration, which stitches always do.” (P. 257.)

Exceptions to the Two preceding Laws in Surgical Pathology.—In pathology there are many general, but few or no universal laws. The two preceding general laws, like all other general laws in medicine, are liable to more or fewer exceptions, apparent or real. To understand the full practical value of these two laws or principles, let me here state one or two of the more important exceptions to them.

* Cooper’s Surgical Dictionary, Article “Sutures,” p. 1211.

† Principles and Practice of Surgery, by Professor Pirrie, of Aberdeen, p. 64.

1. The presence of metallic bodies or threads is liable—like the presence of organic bodies or threads—to produce in living tissues absorption, with the formation of pus—or, in other words, suppuration and ulceration—provided it is combined with strong constriction of, or strong pressure upon these tissues. In fact, surgeons have used, as we have already seen, metallic threads in this way, to produce by firm and forced constriction rapid ulcerative absorption in dividing the necks of polypi, or the solid walls of a fistula *in ano*. Here it might seem as if the metallic material excited by its presence not adhesive, but suppurative and ulcerative inflammation. But this exception to the general law of the tolerance of living tissues for metallic bodies is more apparent than real. For the truth is that the resulting rapid ulceration and absorption in these instances are the result of the mere strong mechanical constriction and pressure of the living tissues, and quite independent of the agent or material, by which that constriction and pressure are produced. The effect would equally follow, whether the ligatures were organic or inorganic, provided only the physical amount of constriction and pressure made by them upon the involved living tissues were sufficient in degree. But the observation becomes important in another point of view. For it shows us that we must not expect metallic, any more than organic suture-threads to remain quite free from any chances of suppuration and ulceration in their courses or tracks, provided they are so placed in a wound as to drag and press greatly upon the included tissues. The living tissues will only in general tolerate, without suppuration or ulceration, metallic threads, on the condition that they are so placed and so adjusted as not to produce unnecessarily strong tension and traction upon the structures through which they pass.

2. Though in surgery organic threads and ligatures, as a general law, speedily produce, by their presence, suppuration and ulceration in tissues in contact with them; yet there occasionally occur in practice exceptions, real or apparent, to this common principle in surgical pathology. Sometimes, though very rarely, an effusion of coagulable lymph only, and not of pus, is thrown out around the organic threads, or, in other words, its presence for five or six days, or longer, excites only adhesive, and not, as usual, suppurative and ulcerative inflammation. Again, sometimes another result is seen, viz., that when silk or flax threads and ligatures are left in the living structures for weeks or months, they in the first instance excite, as usual, more or less suppuration and ulceration in the tissues immediately in contact with them; but after a time the secretion of pus ceases, the included portion of thread becomes dried and rigid, like a non-porous, inorganic material, and subsequently becomes fixed in its site by effused coagulable lymph and granulations. I have repeatedly seen this series of changes in watching the effects of sutures in the lower animals; sometimes with one loop of suture thread remaining moist and the centre of a purulent collection, and a contiguous thread dried, stiffened, and fixed *in situ* by coagulable lymph and granulations. Similar examples occasionally occur in

the human subject. Last year, in a case of complete and extensive laceration of the perineum, I brought the edges of the rent together an hour or two after delivery, by the usual deep quilled suture, and by some superficial stitches in the skin of the perineum, and the mucous surface of the vagina. Three days afterwards, the patient's medical attendant removed the quilled sutures, and the superficial cutaneous stitches; and the reunion of the parts was found complete. I did not see the patient from the day of operating, till three months afterwards, when I was asked to ascertain if there was anything wrong in the vagina. In the posterior wall of the vagina, in the site of the previous laceration, I found, still *in situ*, the two silk stitches, that had been used to bring the mucous walls of the rent into apposition, but which had escaped notice when the other threads were withdrawn. The embedded loops were dry and arid, and their sites marked by an accumulation of granulations.

Such exceptions, however, by their rarity only prove the extent and importance of the very law of which they thus form occasional variations.—*Med. Times and Gaz.*

CONSTIPATION OF THREE MONTHS COMPLETELY REMOVED.—A boy aged eleven years, from Essex, was admitted into the Royal Free Hospital, on the 12th of April, 1858, for obstinate constipation, which had existed for three months, without a single motion. His abdomen was enormously swollen, quite solid almost throughout, from the packing of the bowels, and measured forty-three inches in circumference. There were many symptoms present, solely due to the interference in the natural circulation through such an important channel as the alimentary canal. Dr. Brinton prescribed an enema, which could not be introduced, as the rectum to the verge of the anus itself was absolutely packed with matter. This was got rid of by means of scraping it away, and when this part of the bowel was pretty well cleared, the size of the abdomen was reduced to thirty-nine inches and a half, when enemata began to act. The most useful and efficacious enema now was croton oil, castor oil, turpentine, and gruel. This was given every few days, until the alimentary canal was perfectly cleared, removing an enormous quantity of scybala and hard feces; and the abdomen measured on the 19th of July, the day of his discharge, but twenty-eight inches, its natural size.

This boy had had other enemata previous to that containing croton oil, and although they acted slightly when once the rectum was emptied, still the croton oil appeared to be the most efficacious. He was taking inwardly at the same time, at first colocynth and aloes, and latterly compound rhubarb pill every night, the bowels being relieved daily for the last month.

Constipation was an habitual thing with him, from a general torpidity of his alimentary canal, and he did not seem to have any

hepatic sluggishness. He took but a small quantity of medicine by the mouth until latterly, and the case illustrates very well the value of proper enemata, judiciously administered. When the boy first came into the hospital, and lay on his bed, the prominence of the abdomen was so great that he could not see his feet. He passed a great deal of urine during his constipation, and his appetite was excellent. When he left the hospital, the abdomen was supported with buckle bands. We may remark, that when first admitted he was galvanized over the abdomen, but that proved of no service of itself till the enemata began to act.—*Lancet*, July 31, 1858.

BELLADONNA IN JUVENILE INCONTINENCE OF URINE.—The use of belladonna against incontinence of urine in children, as strongly recommended about a year ago by Mr. Brooke, of the Westminster Hospital, has, we believe, well borne the test of the trials which his laudation of it induced. Several surgeons have, we know, formed favorable opinions of its efficiency. A case under Mr. Hutchinson's care, at the Metropolitan Free Hospital about three months ago, afforded very conclusive evidence of its power. The patient was a boy of ten who had from infancy been exceedingly troubled by inability to retain his water. Nightly incontinence was a matter of rule, and very often the urine would escape during the daytime also. Nux vomica, sesquichloride of iron, etc., had been fairly tried, and without benefit. At first the belladonna seemed to do no good, but being pushed until symptoms of poisoning were apparent, it finally effected a complete cure. The bladder appeared to have wholly lost its morbid irritability, and during six weeks that the boy remained under observation, his mother stated that no single instance of incontinence had occurred. The remedy was given in solution in water, and without any adjuvant whatever. Belladonna is one of our remedies which certainly deserves a more thorough clinical investigation of its powers than it has yet received.—*Med. Times and Gaz.*, July 31, 1855.

NEGLECT OF BRAIN DISEASE.—The poor overwrought brain meets with but little attention and consideration when in a state of incipient disorder. The faintest scintillation of mischief progressing in the lungs, heart, liver, and stomach, immediately awakens alarm, and medical advice and treatment are eagerly sought; but serious, well-marked symptoms of brain disorder are often entirely overlooked and neglected; such affections frequently being permitted to exist for months without causing the faintest shadow of uneasiness or apprehension in the mind of the patient or his friends. Morbid alterations of temper—depression of spirits, amounting sometimes to

melancholia, headache, severe giddiness, inaptitude for business, loss of memory, confusion of mind, defective power of mental concentration, the feeling of brain lassitude and fatigue, excessive ennui, a longing for death, a want of interest in pursuits that formerly were a source of gratification and pleasure, restlessness by day, and sleeplessness by night, all obvious indications of an unhealthy state of the functions of the brain, and nervous system, rarely, if ever, attract attention, until the unhappy invalid, becoming unequivocally deranged, commits an overt act of insanity. Then, the exclamation is, "Poor fellow, his mind has been affected for months!" and no one expresses any surprise that he should, in such a state of mental disorder, have hung himself or cut his throat. It is difficult to induce the public to take a common sense and right view of this important subject; for, if the saving of life is the object, it is to the public mind we must plainly address ourselves. If a person in a previous state of mental and bodily health is conscious that abnormal changes are taking place in the mind—that trifles worry and irritate—that the brain is evidently unfit for work—that the spirits are flagging—that all the evils of life are magnified; if he is disposed to be fanciful—imagining things to exist that have no existence apart from himself—believing that kind friends ill use and slight them; if symptoms like these, or analogous to these, are associated with headache, derangement of the stomach and liver, and want of continuous sleep, the patient may assure himself that the state of the brain is abnormal, and requires careful consideration and treatment.—FORBES WINSLOW, *Journal*.

Biographical Sketch of the late Prof. ROBERT HARE, M. D.

The grave has hardly closed over the remains of one talented and eminent member of the faculty, ere we are called to mourn for another, one equally known to science, and whose fame has extended throughout the civilized world.

Dr. Hare's life has been one of unremitting labor in the cause of science, and by his ability and research he has contributed a large number of valuable discoveries to the list of the present century.

He was born in Philadelphia, in 1781. His father was an extensive brewer, and young Hare, for some time, was engaged in this occupation also. He entered the Chemical Department of the Pennsylvania University about the year 1800, and that he here well employed his time is evinced by the fact that only two years after, he contributed his first invention, the oxyhydrogen blow-pipe, an apparatus by which he was enabled to reduce the hardest substances, and thus evolved many of the metallic bases. He communicated to the Chemical Section of the British Association for the Advancement of Science, while on a visit to England, the fact of his having thus reduced 25 ounces of platina to a fluid state.

For this instrument he was awarded, by the American Academy of Arts and Sciences, the Rumford medal. He subsequently modified it so as to feed it with alcohol.

A very important use of this instrument was afterwards discovered by Lieut. Drummond, who, by the introduction of a piece of lime into the flame thus produced, was enabled to give to science the celebrated "lime light," better known as the "Drummond light."

About the year 1819, he produced a new and valuable galvanic instrument, well known as "Hare's calorimeter," concerning which, he published a detailed account in *Silliman's Journal*. A year or two later, by the same medium, he announced his new galvanic theory, together with a description of a new galvanic instrument, to which he gave the name of the "Galvanic Deflagrator," commonly called "Hare's Deflagrator." By this also he fused platina, etc.

In a little while we find him contributing a new and much improved gasometer, a eudiometer, a litrometer, to ascertain the specific gravity of various fluids, the hydrostatic blow-pipe, the single gold-leaf electroscope, and a host of smaller instruments, or improvements in old instruments.

Nor was it only to chemistry that he made such valuable additions, for in materia medica we are indebted to him for many important improvements, etc. Thus, we have the process for denarcotizing laudanum, and a method of detecting very minute quantities of opium while in solution.

In 1818, he succeeded Dr. John Redman Coxe in the chair of chemistry in the Medical Department of the Pennsylvania University, which he filled with increasing reputation till 1847, a period of twenty-nine years. As he never published any systematic work (his *Compendium of Chemistry* being only a text-book for his pupils,) these lectures are the only record of his many and brilliant discoveries, but they alone are sufficient among the immense number of pupils who have profited by his instruction, to cause him to live forever as a model of industrious and untiring labor in the cause of science.

After his resignation from the University, at which he was elected Emeritus Professor of Chemistry in that school, he paid much attention to meteorology, and read several papers before the American Philosophical Association on tornadoes, in which he attributed the atmospheric disturbances to an electrified current of air. As all new theories meet with more or less violent opposition, of course this was not destined to be received quietly, and on its promulgation, he encountered a storm almost as great as one of the tornadoes for which he was endeavoring to account; and many fierce conflicts occurred at the meetings of the society, between Dr. Hare and his rival investigators.

For more than fifty years he has been an active scientific man, though these pursuits did not prevent him from finding time to mingle in society, and enjoy the relaxation of domestic pleasure. By

his talented mind, he rendered himself agreeable in conversation, and being of a prepossessing manner, he made for himself hosts of friends.

If, in the weakness of age, he may have fallen into any of the popular errors, we must recall the past, and reflect upon the numberless services he has rendered to the world, while yet in his prime, and we will thus find sufficient to counterbalance all his errors.

He died in his native city, on Saturday, May 15th, 1858, in his seventy-seventh year, of typhoid pneumonia.—*Med. & Sur. Reporter.*

MENSTRUATION DURING PREGNANCY.—That a discharge, more or less identical with the ordinary catamenial flow may occur during pregnancy, is admitted by a majority of experienced observers. The following case under the care of Dr. Graily Hewitt, is an interesting example of this kind:

Mary B—, aged twenty-five, presented herself at the Samaritan Free Hospital in April last. She had been married for six years. The catamenia commenced at the age of twelve, and at first appeared every two months. After a suppression which lasted for six months, the discharge became regular at the age of fourteen, and continued so until after her marriage, the ordinary interval being a calendar month. She became pregnant for the first time rather less than six years ago, and was delivered of a healthy child, now alive. During this first pregnancy, however, it is stated that every fourteen days a bloody discharge occurred, lasting three or four days, and this periodic discharge persisted during the *whole period of gestation*. The discharge was rather paler than that observed before she became pregnant. The child was suckled for six months, and during lactation no trace of bloody discharge was noticed. A second pregnancy, attended with precisely the same phenomena, terminated favorably three years ago. The second child, also now alive, was suckled for fifteen months, and the catamenial discharge was absent in this second instance also during lactation. The catamenial discharge is habitually rather excessive in quantity, continuing usually six to seven days; it occasionally extends over twelve or thirteen, and this has been the case since she was married only.

There appeared no reason for disbelieving the facts of the case, as above stated, and as it was important to substantiate them as far as possible, further inquiries were made, the result of which confirmed the truth of the patient's account. From the birth of the second child up to seven months ago, she continued regular; after that time, symptoms of pregnancy were again observed, viz: morning sickness, pain in the legs and back, resembling those which occurred in her former pregnancies; but the catamenial discharge at the same time became irregular, the irregularity consisting, as in the former

two instances, in its taking place about every fortnight. This latter circumstance, indeed, as she herself observed, was one which, from her former experience, led her to consider herself again pregnant. Four months ago the abdomen became swollen, and the breasts much enlarged and painful. Three weeks later, while walking in the street, she slipped upon a piece of orange-peel; and twelve hours afterwards, pains, like those of labour, supervened, and a fleshy substance was expelled from the vagina. From an examination of these and other facts related, it is evident that abortion then took place. The abdomen immediately diminished in size, and has remained very small ever since.

The case is one of very considerable interest. Here, in fact, was an instance of the kind referred to by Desormeaux (quoted by Dr. Montgomery), "in which the appearance of the menses in small quantities, and at an unusual time, was almost a certain sign of conception." So, indeed, the patient, in the case just related, considered it to be. The same series of phenomena were observed, let it be observed, on *three* successive occasions.

The patient now sought relief for pelvic pain and menorrhagia, depending, as Dr. Graily Hewitt was led to believe on excessive uterine engorgement, and deficient involution of that organ after the abortion. No other morbid condition was detected on examination. —*Lancet*, July 24, 1858.

NEUROMA OF THE POSTERIOR TIBIAL NERVE; AMPUTATION OF THE FOOT.—An Irish boy, twenty-four years of age, was recently admitted into St. Bartholomew's Hospital, with a nodulated swelling of the sole of his right foot. It had commenced twelve months ago, and now involved the greater part of the sole in a series of nodules, associated with general swelling, which had lately extended to the inner margin of the sole. He had been three weeks in hospital, when Mr. Lawrence, after consultation with his colleagues, determined to remove the foot above the ankle joint. This joint was quite unaffected, and so were the other parts of the foot. The growth of the tumor had been somewhat rapid of late, and the surfaces of the nodules were discolored; and so far as could be judged by these, together with the history, it looked as if it were medullary sarcoma. The leg was amputated by Mr. Lawrence on the 22d of May, and the foot was subsequently carefully dissected, when a true neuroma was found, the size of a walnut, on the posterior tibial nerve, the intimate fibrils of which surrounded the tumour, or, in other words, the tumour was developed from one or more fibres of that nerve, and caused the others to be expanded over it, and separated from one another as the tumour increased in size. The affected nerve gradually got lost in the structures of the sole of the foot, which had become completely degenerated in character, scarcely any of the natural tissues, excepting, perhaps,

one or two small muscles, being recognizable. The lad, however, is doing very well, and will make a good recovery.

A case, in some respects similar to this, was in the same hospital a few weeks back, under Mr. Stanley's care, of a young woman, who has a pulsating tumour in the sole of her foot; it was diagnosed a pulsating tumour, but turned out to be a neuroma of the internal planter nerve underneath the planter artery.

These cases are of great interest, especially from the difficulty in arriving at a correct diagnosis before operative proceedings.—*Lancet*, June 26, 1858.

Respect your own Profession.

Respect your own profession! If Sir Astley Cooper was ever called to let off the impure ichor from the bloated limbs of George the Fourth, it was the king that was honored by the visit, and not the surgeon. If you do not feel as you cross the millionaire's threshold that your art is nobler than his palace, the footman that lets you in is your fitting companion, and not his master. Respect your profession, and you will not chatter about your "patrons," thinking to gild yourselves by rubbing against wealth and splendor. Be a little proud—it will not hurt you; and remember that it depends on how the profession bears itself, whether its members are the peers of the highest, or the barely tolerated operatives of society, like those Egyptian dissectors, hired to use their ignoble implements, and then chased from the houses where they had exercised their craft, followed by curses and volleys and stones. The father of your art treated with a monarch as his equal. But the barber surgeon's hall is still standing in London. You may hold yourselves fit for the palaces of princes, or you may creep back to the hall of the barber surgeons, just as you like. Richard Wiseman, who believed that a rotten old king with the corona Veneris encircling his forehead with its copper diadem, could cure scrofula by laying his finger on its subject—Richard Wiseman, one of the lights of the profession in his time, spoke about giving his patients over to his "servants" to be dressed after an operation. We do not count the young physician or the medical student as of menial condition, though in the noble humility of science to which all things are clean, or of that "entire affection" which, as Spenser tells us, "hateth nicer hands," they stoop to offices which the white-gloved waiter would shrink from performing. It is not here, certainly, where John Brooks—not without urgent solicitation from lips which still retain their impassioned energy—was taken from his quiet country rides, to hold the helm of our imperial state; not here, where Joseph Warren left the bedside of his patients to fall on the smoking breastwork of yonder summit, dragging with him, as he

fell, the curtain that hung before the grandest drama ever acted on the stage of time—not here that the healer of men is to be looked down upon from any pedestal of power or opulence!

If you respect your profession as you ought, you will respect all honorable practitioners in this honored calling. And respecting them and yourselves, you will beware of all degrading jealousies, and despise every unfair art which may promise to raise you at the expense of a rival. How hard it is not to undervalue those who are hotly competing with us for the prizes of life! In every great crisis our instincts are apt suddenly to rise upon us, and in these exciting struggles we are liable to be seized by that passion which led the fiery race horse, in the height of a desperate contest, to catch his rival with his teeth as he passed, and hold him back from the goal by which a few strides would have borne him. But, for the condemnation of this sin, I must turn you over to the tenth commandment, which, in its last general clause, unquestionably contains this special rule for physicians—Thou shalt not covet thy neighbor's patients.

You can hardly cultivate any sturdy root of virtue, but it will bear the leaves and flowers of some natural grace or other. If you are always fair to your professional brethren, you will almost of necessity encourage those habits of courtesy in your intercourse with them which are the breathing organs and the blossoms of the virtue from which they spring.—*Valedictory, by Oliver Wendell Holmes, M. D., from Boston Med. & Surg. Journal.*

M. Chaveau on Vascular Murmurs.

Session 3d May.—M. A. Chaveau presented to the Academy an abstract of a memoir entitled “Mechanism and General Theory of Vascular Murmurs, deduced from experiments;” of which the following are the principal conclusions:

“Vascular murmurs are purely physical phenomena, that is to say sounds, subject to the ordinary laws of acoustics. Presenting the same essential phenomena, notwithstanding numerous shades of difference, they can justly be attributed to but one essential cause, and that of a mechanical nature.

“That cause does not depend directly upon the quality or quantity of blood circulating in the vessels, and consequently, not upon the tension or relaxation of the vascular parieties. Moreover, it does not reside in the asperities of the internal surface, when not connected with a modification of the calibre of the vessels.

“When a dilatation exists in the calibre of a vessel, a murmur may be produced when the blood arrives at the dilated part.

“A contraction, more or less extensive, in the course of a vessel, may also be accompanied with a vascular murmur, but this murmur

is not produced either by the passage of the blood into, nor through, the contracted part of the vessel. It is only on the passage of the blood from the contracted portion to the part beyond it that the murmur occurs, and as this part of the vessel, in a normal condition, is regularly dilated, it follows that an essential condition of its production is the passage of the blood into a dilated portion of the vascular system.

“Two conditions are necessary to their production, viz., 1st, That the difference between the contracted and dilated portions of the vessel, whether this be absolute or merely relative, should be quite decided; 2d. That the transit of the blood through these parts should take place with considerable force.

“As in the case of all other sounds, molecular vibrations must be regarded as the immediate cause of these vascular murmurs. But, how and whence do these vibrations arise? Observation proves that when blood passes with considerable force from a contracted to a relatively dilated part, it produces a central current through the blood contained in the dilated portion. Now, we know, since the beautiful researches of Savart, that every current of fluid produces vibrations that may be sufficient to produce a sound, and also agitate the orifice whence the current flows. In these cases, the vibrations of the intravascular current and the orifice of flow are clearly perceived by the finger, either in the interior of the dilatation or on its surface. These vibrations give rise to the phenomenon known as the arterial thrill, which is so intimately allied to vascular murmur that they may be said not to exist independently of each other. Like the murmur also, the maximum intensity of the thrill is perceived in the course of the current in the dilated part. It is propagated in all directions, but with characters too variable, in particular cases, to admit of discussion in an essay devoted to the consideration of general doctrines alone.”

Bending and Partial Fractures of Long Bones in Young Subjects.

Some nine months since, Prof. Hamilton published in the *N. Y. Journal* a paper on the above subject. His observations were founded upon experiments made upon the legs of chickens, and references also to cases in surgical practice. His experiments showed that the long bones of chickens may be bent to an angle of 25° , and immediately regain the straight form, dissection showing no lesion in the bone. *Inference*: The same may also occur in the bones of infants.

In practice, Dr. H. has seen fracture of one of the bones of the forearm and bending of the other.

Of partial fractures, Dr. H. remarks that he has observed seven-

teen of the clavicle, and thirteen of the radius or ulna. Of the seventeen cases of the clavicle, four only were attended by immediate spontaneous restoration of form. No examples of this latter peculiarity occurred among the partial fractures of radius or ulna.

It is now about a year since we observed an example of bending of both radius and ulna. The bones were abruptly bent at an angle of 30° from a right line. We saw the case within ten minutes from the occurrence of the accident. There was perfect freedom from swelling, so that a minute inspection of the bones was had. Smoothness of outline, immobility, and consequent absence of crepitus characterized the case. The bones, however, fractured with an audible snap, on an attempt to restore them to the straight form.

We think that in all cases we should prefer to incur the risk of fracture, rather than trust to the spontaneous gradual restoration of form, which generally follows in a greater or less degree. In the dissection made by Dr. H. a few days subsequent to the fracture, he found an ensheathing callus partially surrounding the bone, but absent upon the side where the solution of structure was effected.

Simple Tests for some Important Medicinal Preparations. By
EDWARD R. SQUIBB, M. D.

There is no branch of commerce wherein the competition of trade is more rapidly and more certainly tending to deteriorate and debase the quality of manufactured products than that which deals in medicinal substances; and there is none where the interests of the consumer are more remotely considered in manufacturing, or where these interests are so difficult to guard and protect; whilst there is assuredly no branch whose operations and productions are of more vital importance to the community and the profession of medicine.

An important collateral effect of this debasement of medicinal substances, which does not receive due consideration in the profession generally, is that the effects of the uncertainty and bad quality of these substances are transmitted directly to the practice of medicine, and in failing to fulfill the indications to their use they not only bring distrust and discredit upon both the science and art of medicine, but also tend directly to foster and uphold the quackeries and nostrums of the day, in many ways. For instance, a physician prescribes the compound cathartic pills of the pharmacopœia. They either act drastically, inadequately, or they do not act at all. The patient says the doctor does not understand his business, and the next time buys "Brandreth's Pills," or some other nostrum, and is better satisfied with the result. The circumstance that the compound cathartic pills were made from bad and deficient materials, and through competition in trade were unduly active from the addition of some cheap drastic, or inert from consisting mainly of starch and

gum, whilst the extracts from which the nostrum was made had been much more carefully prepared—is quite overlooked by both practitioner and patient, to the lasting injury of the interests of both. It is, however, a fact that a large proportion of the compound extract of colocynth sold is manufactured from materials so cheap and so bad that it is rarely quoted in prices current at much above half the price of the crude materials from which it should be made; while the writer has known of several hundred pounds having been made and sold within one year at a price below one-third of that which the good materials directed by the pharmacopœia would have cost.

Another fertile source of bad and imperfect medicinal substances lies in the use, in manufacturing, of cheap substitutes and by-products, and in utilizing residues for improper purposes, so that through many ways the tendency is constantly increasing whereby the science of medicine is subsidized and radically injured by the debasement of the agents upon which the success of the art of medicine so much depends.

The check or remedy for this evil tendency rests entirely and only with the profession, and may be found in various ways, but in no way more easily or more certainly, for such substances as admit of it, than in the application of simple and reliable tests.

The writer having for some years past been engaged in manufacturing preparations of known character, for the navy, by the United States official standard, has had the opportunity of observing their properties pretty closely, and has collated and originated a few simple and easy tests of quality, which it is the object of this paper to communicate to the profession. These tests require little time, skill, or apparatus, and are adapted to the extemporaneous use of the physician or apothecary, so that they may be conveniently applied at the dispensary counter or upon the office table. They consequently do not aim at critical accuracy, but at the more important point of practical discrimination.

A very important general indication of quality in medicinal substances is the source from whence they come, and the channels through which they may have passed. The profession should obtain a better and more critical knowledge of the various manufactures, that due weight might be given to the names associated with the preparations they use, and should then be more careful to observe that the authenticated label of the manufacturer is affixed. In the common desire to be considered as manufacturers, and from the indisposition to circulate or publish others' cards or names in connection with preparations sold, it is becoming quite rare to find the name of the real manufacturer upon the packages of medicinal preparations. They are commonly sold without evidence of their source, and therefore without any real responsibility upon any one. The traditional or reputed character with which they commonly pass through the various hands to the profession is too often without other foundation than the disposition to buy cheaply and sell at large profit. From the circumstances that few apothecaries manufacture even their more simple preparations, and that there can be no proper

responsibility in a verbal character transmitted through several persons, the professions both of medicine and pharmacy should be more careful that their packages are duly authenticated from the desired sources, as general tests or evidences of quality. A very large proportion of medicinal substances must depend mainly upon some such evidences of quality until their therapeutic value is determined in practice, since they are beyond the easy reach of chemistry, and since sensible properties are so often deceptive. Among those which are susceptible of easy practical discrimination by simple means, the writer is at present able to offer the following :

Ether.—A strip of unsized paper, or a clean glass rod, dipped into the ether and allowed to dry for a moment or two, will by the odor it gives afford evidence of the less volatile impurities that it commonly contains. There usually remains a somewhat aromatic slightly-pungent odor, that is not hurtful in the more dilute ether used for common medicinal purposes, but the disagreeable oily odor often found is more objectionable, whilst really good ether should leave no odor whatever. The ether used for inhalation should leave upon the sponge, paper, or rod, no foreign odor at all.

The strength of ether is less easily ascertained except by a specific gravity instrument. With a little practice, however, with some good specimen for comparison, a very satisfactory estimate may be found by observing the slowness or rapidity with which any given specimen evaporates from the palm of the hand. Ether for inhalation should give off bubbles of vapor rapidly at the temperature of the palm of the hand. A thin test tube, containing the specimen, should be grasped firmly for a minute or two, and then the ether should be stirred at the time of observation. The bubbles arise from the points of contact between the tube and stirrer.

Compound Spirit of Ether—*Hoffman's Anodyne*.—Two drops of officinal spirit stirred into a pint of water give to the mixture a distinct oily surface, and the peculiar fruity, aromatic odor of the heavy oil of wine free from the odor of ether and alcohol. Sixty drops in the pint renders the water decidedly turbid. While, with four fluid drachms to the pint, a scanty precipitate of minute oil globules occurs after a few minutes' standing. The fruity, apple-like odor is characteristic of the chief anodyne ingredient, the oil of wine, and is entirely wanting in the ordinary commercial article. Without the oil of wine the preparation is a stimulant antispasmodic. With the oil it is a highly valuable anodyne antispasmodic, particularly adapted to nervous irritation and hysteria. The liquid universally sold as Hoffman's anodyne is a residue of the ether-making process, containing varying proportions of ether and alcohol with a little etherole or light oil of wine, but in no single instance of the many examinations made by the writer has any true heavy oil of wine been found in it. Heavy oil of wine, from being expensive and somewhat difficult to make, has finally been entirely omitted from the preparation, and is now hardly to be met with in commerce. While, as a consequence, the preparation to which it belongs, from a failure to meet

the proper indications to its use, is become a stimulant, and slowly going out of use.

Spirit of Nitric Ether.—Two or three fluid drachms of good sweet spirit of nitre that is not more than seven or eight months old, and kept in the usual way, contained in an ordinary test tube, and plunged into water that has been previously heated to 164° , will boil pretty actively. While, if freshly made, or not more than two months old, or if well preserved from light and air, no matter what the age, it will boil actively when surrounded with water at a temperature of 156° . From the fact that this among other liquids may be heated far above its boiling point without ebullition, it becomes necessary to drop a few small fragments of broken glass into the test tube with the spirit after the latter has been heated and while still held in the water. Another precaution necessary in the application of this test, is to discriminate between the mere formation of small gas bubbles around the fragments of glass, and a true ebullition. For whilst the former will occur as a fine effervescence, at any temperature above 140° in any spirit of nitre that contains hyponitrous ether at all, true ebullition, in which the vapor bubbles are much larger and in which they reach the surface and form, by their succession, a bead around the edge of the liquid, only occurs at the boiling points named. The preparation should not be quite colorless, but of a pale straw tint, and should effervesce very slightly upon the addition of carbonate of ammonia. When slightly acid, carbonate of ammonia is the best corregent, because the salts formed are therapeutically similar. The officinal preparation is a solution of five per cent. of hyponitrous ether in alcohol. The ether is the medicinal agent, and the alcohol is necessary for its preservation and dilution only, the latter indeed being often contra-indicated, as in some febrile conditions, where the former would be useful. In commerce, however, it is rare to find the proportion of the hyponitrous ether exceed three per cent. While in a great majority of cases it is below two per cent., and often in a proportion too small to be detected except by the odor. One of the largest manufacturers in the United States makes it of five different qualities to suit the market, and all these below the officinal standard. Another maker (and the two produce a very large proportion of all that is sold in the United States,) sells but one kind, and that, though of varying strength, is commonly below two per cent. The above test alone will reject all such specimens. It thus happens that the physician who prescribes this preparation in view of its supposed diuretic and diaphoretic effects is disappointed, and obtains instead the, to some degree, opposite effect of so much alcohol. Hence this preparation also is gradually falling into disfavor and disuse. In view of the circumstances mentioned in connection with these preparations, and the like tendency in many others, it is well worth while for the profession to consider how far it is willing to sacrifice its valuable curative agents to the cupidity of manufacturers. For detailed examination of specimens of sweet spirits of nitre, Hoff-

man's anodyne, etc., etc., see American Journal of Pharmacy, vol. xxviii. p. 302 *et seq.*; vol. xxix. p. 202 *et seq.*

Chloroform.—When equal volumes of chloroform and colorless concentrated sulphuric acid (the strong commercial oil of vitriol answers very well) are shaken together in a glass stoppered vial there should be no color imparted to either liquid, or but a faint tinge of color, after twelve hours' standing together. Nor should there be any heat developed in the mixture at the time of shaking it first. Any particles of dust, or cork, or other organic matter that may have been in the vial used, or in the chloroform, will, by reaction of the acid, produce a tinge of color in the acid or its separation from the chloroform, corresponding to the quantity of such particles present, and therefore in the application of the test care must be taken to avoid any such particles. Or if the acid be only faintly tinged at the end of twelve hours' contact with the chloroform, it may be attributed to some such collateral accidental cause. But if at the end of twelve hours, or sooner, the acid becomes yellow, or brown, or any darker color, it should be unhesitatingly rejected. If the mixture of acid and chloroform should become warm on shaking first, an admixture of alcohol would be indicated. One or two fluid drachms of chloroform spontaneously evaporated from a clean surface of glass or porcelain, or from a piece of clean unsized paper, should leave no odor after it. Commercial chloroform generally will turn the acid brown within two or three hours, and will often render it black and tarry-looking within two or three days; whilst with chemically pure chloroform there is absolutely no reaction within many days.

Calomel.—The most common and injurious contamination of calomel is corrosive sublimate, whereby its otherwise mild action is rendered irritant. This impurity is easily detected by shaking a drachm or two of calomel in a test tube with distilled water, and, when the water shall have become clear, adding a drop or two of liquor ammonia. If corrosive sublimate be present the ammonia will precipitate it and render the water cloudy.

Iodide of Mercury—is often irritant and harsh in its action through contamination with biniodide from faulty preparation. The writer has seen its use abandoned upon the ground of idiosyncrasy, when on examination it was easily shown to contain a notable proportion of the irritant harsh red iodide. The red iodide may be easily detected in it by rubbing a little of the suspected iodide in a mortar with strong alcohol, and then allowing it a few moments to dry. The evaporation of the alcohol leaves the red iodide along the pestle marks as a border to the iodide. A minute contamination becomes very easily seen in this way.

Mercury with Chalk—is of late very commonly found to be harsh and irritant in its action, producing or increasing intestinal irritation to such an extent that many practitioners have abandoned its use, while others are puzzled by its effects.

This also is a result of faulty preparation, wherein through time and labor-saving expedients, or bad appliances, a portion of the

mercury becomes oxydized instead of being simply comminuted or divided. However well prepared, it almost always contains a very small proportion of suboxide, but this being one of the mild preparations of mercury, never produces the bad effects alluded to. To detect the peroxide, or irritating property, a drachm or two of the mixture is treated with an excess of acetic acid, and the solution filtered off clear. A few drops of hydrochloric acid is then added to the clear solution. If the preparation be good, this will produce only a slight precipitation of insoluble subchloride from the small quantity of acetate of suboxide formed. If the preparation be old, or badly kept, having had free access of light and air, a pretty copious precipitate will be formed by the hydrochloric acid. The clear solution is again filtered or decanted off this precipitate, and liquor ammonia added to it. If the preparation was contaminated with any peroxide it will now be precipitated by the ammonia as white precipitate. (See American Journal of Pharmacy, vol. xxix. p. 338.)

Blue Pill—is also liable to contain oxydes of mercury, and thus to lose its mild character and operation through faulty preparation. In this the oxydes are detected in precisely the same way as in the case of mercury with chalk.

Iodide of Potassium—is occasionally contaminated with carbonate of potassa to the extent of impairing its medicinal effect. This is easily detected by adding lime water to the solution of the iodide, when carbonate of lime will be precipitated and render the mixture cloudy.

Bitartrate of Potassa—frequently contains much tartrate of lime. This may be detected by stirring a few drops of liquor ammonia into a mixture of a few grains of the specimen in two or three drachms of cold water. The ammonia renders the otherwise insoluble potassa salt quite soluble, whilst it has no immediate effect on the tartrate of lime. If then a portion remains undissolved after the application of the test, it may be regarded as an impurity.

It is hoped that the simplicity of these tests for a few important substances may not only lead to their frequent adoption, but that the opening of the subject may stimulate others to search for and publish better tests, and to extend the list of substances that may be easily and simply tested.—*N. Y. Med. Jour.*

THE DISEASES OF QUININE MAKERS.—M. A. Chevallier, at the last sitting of the Academy of Sciences of Paris, communicated a paper on the diseases to which workmen employed in the manufacture of sulphate of quinine are subject. It appears from his statement that one of the disorders is a cutaneous affection severe enough to force them to suspend work for a fortnight, a month, or sometimes altogether. M. Chevallier further quotes M. Zimmer of Frankfort to testify to a particular kind of fever-bark fever (*das China Fieber*)

which affects workmen engaged in pounding bark. This has not yet been observed in France. It is described as being so painful that those who have once suffered throw up employment rather than risk a second attack. As for the cutaneous affection, it attacks not only workmen, but those about the place, and affects alike the sober and the intemperate. No remedy has as yet been discovered.—*Lancet*.

PAINLESS CAUSTIC.—M. Picdagnel, after various trials, has succeeded in producing a caustic that may be employed, causing little or no pain. It is formed of three parts of the Vienna caustic in powder and one part of hydrochlorate of morphia, intimately mixed together, and then made into a thick paste by means of chloroform, alcohol, or water. It is applied to the skin on diachylon. A black eschar is produced in fifteen minutes, increasing in thickness with the duration of the application. The morphia mixed in the same proportions with powdered cantharides, prevents pain during the rising of a blister. M. Picdagnel, who at present has only used this means for the production of issues and blisters, states that the action of the morphia is merely local.—*Gaz. de Hop*.

Dr. A. Mercer Adam has commenced in the Edinburgh Medical Journal some sketches of universities, hospitals, lunatic asylums and mineral baths of Holland, Belgium, Germany and Austria. We extract from the last paper his sketch of Prof. Vrolik, of Amsterdam, and of the University of Utrecht and its distinguished professor, Shroeder Van der Kolk.

‘The medical ‘lion’ of Amsterdam is undoubtedly Prof. Vrolik, the celebrated anatomist and physiologist. Of course I speak of Vrolik the younger; for, though his father still lives, and is in vigorous health, he may now be said rather to belong to history than to be one of the ‘Men of the Time.’ Accordingly I went to present my letters of introduction to this gentleman, who received me with that frank courtesy, of which my professional brethren in England must entertain pleasing recollections. Vrolik is a tall, heavily built man, with an open expression of countenance, and very fine dark eyes—possessed of more vivacity than is usual among the Dutch. I spent a very pleasant afternoon in his society, and inspected, along with him, all the valuable private collection of anatomical and zoological specimens which has been accumulated during the joint life-times of his father and himself. This museum is very rich in osteology. The collection of skulls is larger than that of Professor Vander Hoven, of Leyden, and contains magnificent specimens of all the ethnological varieties. Among them is a curious microcephalous skull, which, in several places, is atrophied by the pressure of the

cerebrum. A large cabinet is completely filled with illustrations of ankylosis of every joint in the body; and among them are two interesting preparations of perfect osseous union of the symphysis pubis, one of which occurred in a healthy elderly woman, while the other was the result of traumatic inflammation of that part. Another cabinet, equally large and complete, is devoted to specimens of dislocations; among which are some curious preparations of congenital luxation of the femur, showing the increased transverse diameter of the pelvis, resulting chiefly from the strong action of the iliacus internus muscle in this affection. His collection of pelves is extensive, and well selected, containing some interesting preparations showing the various abnormalities and deformities. Among them is a pelvis of enormous size and weight, the largest and heaviest I ever saw, which belonged to an Ethiopian female. But it is especially in preparations illustrative of teratology that Professor Vrolik's museum excels all others that I am acquainted with; for, having devoted a life-time of careful attention to the study of malformations, he has accumulated a good collection, and he is at present the highest living authority on the subject. Such men as he and our countryman, Allen Thomson, of Glasgow, have followed well in the footsteps of Geoffroy Saint Hilaire, and have elevated to the dignity of a science what was formerly a mass of superstitious uncertainty and absurd speculation. A very interesting malformation has just recently been added by Vrolik to his collection, viz., of the variety *Pyrocephalus Syreniformis*, which Vrolik considers quite unique. This seems externally merely a dolphin-like mass of flesh, or rudimentary fœtus with undeveloped fin-like extremities; yet, upon dissection, Vrolik found that it contained a perfectly organized skeleton and viscera. The brain was found to be very large; it was proportionally more developed than any other part, and the larynx ended curiously in a *cul-de-sac*. Another new preparation of great interest is a fœtus, which was born with congenital umbilical hernia, and also a preternatural anus. Instead of being in the usual place, the rectum terminated anteriorly, at the site of the rupture, in two months, thus forming a double anus. The collection of double monstrosities is very complete, and the dissections of the xyphophage variety (where the fœtuses are united at the sternum) show that successful disunion by operation is rendered impossible by the fact of their livers being united. In physiology there are also many interesting preparations, especially those which illustrate the recent discovery made conjointly by Van der Kolk and Vrolik, of the existence of reticulated venous plexuses surrounding the arteries in the wings of fowls, especially in those which possess great strength of pinion—a provision doubtless designed to facilitate the circulation of the venous blood at times when the veins become forcibly compressed by the strong action of the surrounding muscles. The preparations showing these venous plexuses in the wings of swans and eagles, are very successful and beautiful injections. I did not see the elder Vrolik, as he was from home, nor had I sufficient time to see any of the other medical men of the city, as I was anxious to

pass on without delay to the more important medical school of Utrecht.

“As a school of medicine, Utrecht unquestionably stands highest among the Dutch Universities, and the celebrity of several of its living professors has attracted to it much of the attention of the scientific world. The names of Schroeder Van der Kolk, Donders, Harting, and Mulder are very familiar to every student of modern medicine, and the influence of their views have extended to all lands.

“The University of Utrecht is a plain building, which was founded in 1636. It contains a fine hall, which, at the time of my visit, was in daily use for medical and other graduations. At one end of it is a gallery wherein musicians perform during the ceremonies of the graduations, which is gaily bedecked with flags, swords, spears, and drums—trophies of the gallant part which was played by the alumni of this college, during the struggle for independence, at the time when Holland was separated from Belgium in 1830, when the students of Utrecht, and of the other Dutch Universities, patriotically enrolled themselves in corps, and fought most valiantly for the defense of their country. Other banners, bearing the arms of Dutch cities, &c., adorn the walls; and high above them all flames the emblem of the University itself, a burning sun, with the motto, ‘*Sol Justitiæ illustra nos.*’ There are 400 students, of whom 70 are medical. Each medical class costs about £2 10s. for the session, and the professors, in addition to these fees, receive about £250 each per annum from the Dutch government. In connection with the University there is a very good anatomical museum, chiefly remarkable for possessing a large collection of well executed wax models. The physiological laboratory of Professor Donders is also in the University. It is fitted up with microscopes and other scientific apparatus; among these I observed the most interesting instrument called the Ophthalmotrope of Ruete, which attracted very much notice when it was exhibited last year at the Ophthalmic Congress at Bonn. It consists of a model of the eye, capable of moving exactly as the natural organ, and having delicately arranged silken cords attached to it behind, which act as the muscles of the ball. By means of a graduated scale, and some highly ingenious mechanism, one can see at once, by the lengthening or shortening of each cord, what muscles act in producing every movement of the eye, and to what extent comparatively each of them operates in these processes. The saloons containing Professor Harting’s admirable microscopical collection immediately adjoin Donders’ laboratory. In another part of the town, Mulder, the Professor of Chemistry, has a splendid laboratory, which was expressly built for him.

“Few living physiologists have a wider spread reputation than Schroeder Van der Kolk, the Professor of Anatomy in Utrecht. Though now an elderly man, he still retains all the enthusiasm of youth for the prosecution of physiological science; and when he is talking of his experiments or speculations, he warms with the subject, his manner becomes very energetic, and his face brightens up

into a pleasant smile. In appearance, he is a man of about 60 or 65 years of age—of middle size, with iron gray hair, and a slight stoop, from long study and bending over microscopes. I spent a very pleasant forenoon with him, seeing all his pathological, physiological preparations, about which he discoursed to me most enthusiastically in German. He showed me some finely injected preparations, to illustrate his theory of the non-existence of veins and nerves in the centre of carcinomatous growths, the injection being seen to traverse only the arterial vessels in a section of such a tumor. The pain attending the disease is attributable, he thinks, to the cancer cells entering and destroying the substance of the nerves in the surrounding tissues. We talked a good deal of the celebrated discussion about cancer, which occurred two years ago in the Academy of Medicine of Paris, and he remarked that whatever may be said to the contrary, the microscopical diagnosis of cancer is not to be sneered at as an impossibility. He thinks, however, that in making a histological diagnosis of carcinoma, we should look for the cancer cells in the tissues immediately adjoining as well as in the suspected growth itself. Of Professor Hughes Bennett's '*Researches into Cancer*,' he spoke in terms of unqualified commendation; and, in common with all the continental physicians with whom I have conversed, he entertains the highest admiration of the efforts that have been made by Dr. Bennett to establish in England an improved system of medicine, founded on a scientific rational basis, and in which it is sought to reconcile correct diagnosis and successful treatment with the most advanced views of modern physiology and pathology. And all honor, say I, to such men as Van der Kolk, Donders, Kolliker, Virchow, Claude Bernard, Hughes Bennett, and others, for the impetus they have given to the culture of rational medicine. Although we may be unable, as yet, to deduce from *all* their investigations, theories of disease or modes of treatment superior to those which we at present possess, still there cannot exist a doubt that, eventually, all scientific medicine must be established on a rational basis of improved systems of physiology and pathology.

"I have said that Van der Kolk, in his mellow age, has the pleasure of knowing that ere he dies his merits are acknowledged, and his fame European. It is Professor Donders, however, who is now the man of most hope and promise in Utrecht, and to whom, consequently, most of public attention is directed. Like Simpson, Scanzoni, and many other eminent men, he has earned a wide reputation, while yet comparatively young; and his skill as an oculist attracts thousands of patients yearly, to be under his care. Professor Donders is about 40 years old, rather tall, well built, and of very dark complexion; he has a quick piercing black eye, which seems at once to get at the root of a matter, and he has a frank manner and a winning smile, which irresistibly inspire complete confidence in his skill. He has given an immense stimulus to physiology by his unwearied labors; and his great enthusiasm and his invariable courtesy have rendered him a great favorite with the Utrecht students. The medical literature of Holland is under deep obligations to him;

for he was not only one of the principal supports of the *Nederlandsch Lancet*, during the existence of that periodical, but since its decease he and an Amsterdam physician have commenced a new medical periodical, in which henceforth the contributions of the Dutch medical men will be published in German instead of Dutch, as being a more generally understood language."

In Haarlem I observed, in one or two streets, a curious Dutch custom peculiar to the town, which may be interesting to accouchers. When a birth takes place here a handsome pin-cushion, profusely ornamented with lace, is affixed to the outside of the street door of the house, to notify the occurrence of the event to the public. If a boy has been born the pin-cushion is of a red, and if a girl it is of a white color. A flag of truce is not more respected than this little ensign of millinery work, for as long as it hangs on the door the house is held sacred, and is protected from the approach of duns, bailiffs, or tiresome acquaintances; and even troops, in marching past, must cease beating the drums or blowing their bugles, lest "mother and child" should be hindered from doing well. It is also a common custom throughout Holland, in case of sickness, to append a daily bulletin of the patient's progress, signed by the doctor, to the outside of the street door, so that inquiring friends may read the intelligence without occasioning annoyance to the patient by ringing or knocking.—*American Monthly*.—*Edinburg Medical Journal*.

The following statistics in relation to *The Poor in Paris*, are taken from a daily paper:

The administration publishes every year a report of its proceedings. We extract the following from that for 1857: "Paris possesses 16 hospitals for the treatment of diseases, and 12 hospices or places of refuge for the incurable, or for aged paupers. The support of these different establishments requires great resources, and the account for 1857 gives the ordinary receipts at 16,427,117f., and the expenses at 16,132,114f. The ordinary receipts are as follows: Landed property and revenues, 970,928f.; interest of capital, 700,065f.; rents and dividends, 1,417,802f.; eventual revenues, 213,214f.; concession of ground in the cemeteries, 162,181f.; duties on theatres, &c., 1,389,240f.; bonus from Mont de Piete, 259,157f.; reimbursements by families and communes, 3,561,121f.; municipal subvention, 7,207,137f.; revenues and foundations, 546,249f. Total, 16,427,117f.

On the Influence of Sewer Emanations. By Dr. HERBERT BARKER.

(*Sanitary Review*, April, 1858.)

Dr. Herbert Barker has lately been making some inquiries as to the influence on the health of animals, of exposure for a long time to air rendered impure by the diffusion through it of emanations from sewers. The full details of these experiments are recorded in the essay "On Malaria," written for the Fothergillian Prize of the Medical Society of London for 1858; but, as the subject has important sanitary bearings, Dr. Barker has published in the "Sanitary Review" an outline of his researches.

The gaseous emanations from sewers have been subjected, to a certain extent, to chemical analysis. There have been thus detected in them sulphuretted hydrogen gas, sulphide of ammonium, carbonic acid, nitrogen, sometimes sulphuretted hydrogen, and various organic living products. Dr. Olding has recently pointed out the diffusion of an alkaline gas through sewer air.

For the purpose of experiment, Dr. Barker selected a large cesspool, which received, together with the animal excreta, the liquid refuse of an inhabited house. The cesspool was full, and had at all times so bad a smell, that during hot weather the vicinity was scarcely tolerable. The inhabitants of the house, however, had not for many years suffered from any epidemic; nor did the near presence of the sewer seem to affect their general health.

Dr. Barker had built, close by and nearly over the sewer, a small room. Two gutta-percha tubes, one inch in diameter, were carried down into the cesspool through its upper wall, and terminated in two large inverted funnels a few inches above the surface of the sewage matter. The other ends of the gutta-percha tubes were in the small room, and were so constructed that they could be opened or closed at pleasure. By a bellows attached to the free end of one or other of the tubes, he was enabled at any time to draw off the sewer air and subject it to examination. He did this on numerous occasions—at times when the weather was very hot and the neighborhood of the sewer most offensive—at times when the temperature was very low and the place inodorous. As a general rule, the sewer gas yielded neither acid nor alkaline reaction, but sometimes the reaction was alkaline. At all times, mixed with the common air, carbonic acid gas, sulphuretted hydrogen, or sulphide of ammonium, were detectable. When the reaction was alkaline, ammonia was evidenced. He could detect no other foreign products in the sewer air. He tested for evidence of cyanogen compounds, without any affirmative indication.

When this inquiry had progressed for several weeks, he tried the influence of sewer air on animals exposed to it for a long time. For this purpose, he had made a chamber of wood and glass, with a cubic measurement of 5832 cubic inches. One of the gutta-percha tubes was introduced into it at the lower part; from the upper part

he carried a tube in the form of a small chimney. At the point where the long tube piping from the chamber made a right angle upwards, it expanded into a conical box, in which a lamp was placed, so as to create when alight a constant upward draught. The whole played well. When the chamber was closed and the lamp arranged, a current of the sewer air was kept steadily passing through it. Dr. Barker also attached a pair of bellows to the chamber, in such a way that he could at any time remove the air by working them, and subject it to investigation, without interfering either with the experiment which might be progressing. In the experiments to be related, the animals operated on were placed in the chamber, were fed by a funnel whenever necessary, and were subjected to the sewer gases as is now to be described.

EXPERIMENT 1.—Dr. Barker placed a young dog in the box at twelve o'clock noon, and kept a current of the cesspool air passing constantly through the chamber by means of the chimney draught. Half an hour after the exposure, he became very uneasy and restless; he vomited, and had a distinct rigor. In the course of the day he suffered from diarrhoea and tenesmus. After twelve hours' exposure, he was allowed fresh air; but on the next day, when he was removed altogether, he was exhausted. The diarrhoea and vomiting had ceased, but he refused food for some hours. However, he soon recovered.

The air breathed in the chamber by this animal yielded evidence of sulphuretted hydrogen.

EXPERIMENT 2.—On placing another dog in the box connected with the cesspool, and subjecting him to a free current of the foul air, similar results occurred. In ten minutes the creature became very uneasy, and soon afterwards suffered from vomiting and diarrhoea. After these effects, however, he suffered but very little, although kept in the chamber for five hours. After removal he quickly recovered.

EXPERIMENT 3.—A mouse placed in a cage was let down into the cesspool, to within three inches of the surface of the contained soil. The cesspool was freely open above, so that there was no exclusion of air. The animal was also well plied with food. After this exposure for four days, the animal seemed lively and well, and took his food heartily. On the next day he was found dead.

EXPERIMENT 4.—Another dog was subjected to the cesspool air during a period of twelve days, with such brief intermissions only as sufficed for rapid cleansing of the box. Throughout the time food was liberally supplied him. The results were as follows:—

During the first day the animal was restless and uneasy, and refused food. On the second day vomiting came on, and was repeated frequently during the day. In the afternoon there was diarrhoea, accompanied by thirst and restlessness. On the third day, in the morning, he had marked shiverings, and refused all food. The feet were somewhat swollen. Towards evening he slept, but had a peculiar kind of tremor with each inspiration. On the fourth day he took food, and drank some milk. He slept during the fore-

noon, but was restless towards evening. On the fifth and sixth days he was much the same. On the seventh day he was restless and relaxed, and ate no food. On the eighth day he ate but little food, and was restless; he was by this time thinner and feeble. On the ninth day he had eaten no food for two days, and seemed very ill and miserable. He was therefore taken from the box while it was cleansed, and offered food, which he ate voraciously and to repletion. When removed from the box, his skin was preternaturally hot and dry; he was very weak, and his gait feeble. On the tenth day his appetite was better, but he vomited and had diarrhoea in the evening. On the eleventh day he was very restless, and had but little appetite; and on the twelfth, the symptoms being much the same, he was removed to his kennel. He walked feebly; but soon after his liberation ate heartily of food. He continued very thin and weak for six weeks after his removal from the cesspool air.

Having thus ascertained in some measure what was the effect of long exposure to the vitiated air of the cesspool, Dr. Barker subjected the animals in the same chamber to certain percentages of such of the individual gases as had been found at various times emanating from the cesspool.

Sulphuretted Hydrogen. EXPERIMENT 5.—Dr. Barker placed a puppy in the box, as before, and introduced 100 cubic inches of sulphuretted hydrogen, or 1,714 per cent. The breathing became instantly labored. In two minutes the animal fell insensible on his side, and in another half minute he was dead without a struggle.

An hour after death, the right side of the heart was found filled with fluid blood to distension. In the left side the blood was partly coagulated. The fluid blood coagulated quickly when received into a glass. The corpuscles of the blood were natural. The lungs were congested in the lower lobes and posteriorly. Above, they were pale and free from congestion. The stomach and abdominal viscera were healthy. The vessels on the surface of the brain were slightly congested.

EXPERIMENT 6.—Dr. Barker placed a puppy in the box as before, and drove in twenty-five cubic inches of sulphuretted hydrogen, or 0.428 per cent. In three minutes the animal fell on his side insensible. In this condition he lay for an hour without any indication of pain, but with catching respiration. At the end of an hour he ceased to breathe.

Directly after death the lungs were found generally pale, and were free from congestion. The right side of the heart was filled to distension with blood. The left side contained fluid blood. Blood coagulated in eight minutes after being removed from the body. It was dark in both cavities, and the corpuscles were irregular. They floated about freely between the slips, but not one was natural. Some were crenated at the edges, and thus shrunken and broken up. The stomach presented nothing unnatural. The vessels of the brain were congested.

EXPERIMENT 7.—At thirty-seven minutes past 4 P. M., a dog was placed in the box, and twelve cubic inches of sulphuretted hydro-

gen gas, or 0.205 per cent., were slowly introduced. Within a minute he fell on his side, and was seized with tremors. The action of the heart became irregular, and within four minutes the respiration had apparently ceased. This cessation of respiration continued for about two minutes, when he began to breathe heavily. The respiration next became very quick and catching. Afterwards the quick respiration came on in paroxysms, with an occasional long-drawn inspiration. In three-quarters of an hour from the commencement, the respirations were 112 per minute, rising sometimes to 120; they then became deeply stertorous, as in apoplexy. Dr. Barker removed this dog from the box at fifteen minutes past six, having exposed him to the gas one hour and thirty-eight minutes. The respirations were at this time stertorous, the limbs were rigid, and the head was drawn backwards. The respiration became gradually more feeble and catching, as if solely diaphragmatic, with a kind of hiccup. The body was universally cold. The respiration then became very peculiar, consisting of two short inspirations to one expiration; and at fifteen minutes past 2 A. M. the dog died, nine hours and thirty-eight minutes after the commencement of the experiment.

On examination twenty hours after death, there was moderate cadaveric rigidity. The brain was found slightly congested externally, but presented no bloody points. The lungs were collapsed, dark in patches, and congested. The heart was enormously distended, and was remarkable for being excessively loaded with separations of fibrin. The right auricle, pulmonary artery, and the left auricle, were literally distended with fibrinous concretions, to the almost entire exclusion of red blood. The right and left ventricles contained a large quantity of dark clotted blood, but there was some separations of fibrin in these cavities also. The fibrinous concretions in the right auricle and pulmonary artery were of pure whiteness. Those on the left side were red and striated, very closely resembling muscular fibre. The liver and spleen were congested. The kidneys were normal. The stomach, viewed externally, had a vascular appearance; but internally, the mucous surface was natural. There was no serous effusion into the abdominal cavity, nor any particular inflation of the alimentary canal with gaseous matters.

EXPERIMENT 8.—Another dog was put into the box, into which there were introduced twelve cubic inches of sulphuretted hydrogen, or 0.25 per cent. He suffered from violent tremors and shortness of breathing. When nearly an hour had elapsed, he appeared better, and was removed at the end of five hours, not laboring under any morbid symptom.

A jackdaw was placed in the chamber. Through the air of the box were diffused nine cubic inches of sulphuretted hydrogen, or 0.154 per cent. Within two minutes the bird essayed to vomit, and almost instantly afterwards was purged. He was incessantly restless, and the breathing was remarkably hurried and catching. After inhaling the gas for ten minutes, his movements became so feeble that it was with difficulty he stood. The pupils, at first con-

tracted, soon became widely dilated. The beak was set widely open; and the tongue, dry and dark at the top, was protruded at each inspiration. After remaining in this condition for an hour and a half, he was removed from the box, and soon recovered.

A dog was placed in the box at 8 A. M., and nine cubic inches of sulphuretted hydrogen, or 0.154 per cent., were introduced. Within two minutes the respiration became quickened, with reeling. For a quarter of an hour he was restless, and walked with difficulty. His movements were very like those resulting from intoxication. This effect gradually subsided; and he was taken out of the chamber in three hours, merely enfeebled.

Another dog was placed in the chamber. When he was composed to his new situation, six cubic inches of sulphuretted hydrogen, or 0.102 per cent., were introduced. At first there was watering of the eyes, followed by signs of thirst, muscular debility, and slight drowsiness. In half an hour the breathing had become hurried, and an hour later he suffered from violent diarrhœa; the breathing became more rapid, and the tremors more intense. Three hours after his first introduction the respiration was still hurried, and the heart beat so rapidly that it could not be counted with precision. He was now again purged. Removed from the chamber he soon recovered in the pure air.

Another jackdaw was put into the box as before, with six cubic inches of sulphuretted hydrogen, or 0.102 per cent. Within two minutes the bird commenced to vomit (a curious symptom to observe in birds), and he was also freely purged. The symptoms continued for twenty minutes; afterwards the respiration was very hurried. After keeping him in the box for two hours, without much further modification of symptoms, he was removed, and soon recovered.

EXPERIMENT 9.—A dog was introduced into the box as before, and three cubic inches of sulphuretted hydrogen, or 0.056 per cent., were driven in. He suffered almost at once from tremors of the muscles. The respiration was also quickened, and the heart-beat was extraordinarily rapid. At the same time he seemed sufficiently lively. After keeping him in the box for two hours, he was let out. The pulsations of the heart could be heard at a short distance from his body, the action was so intense. After removal, he was freely purged for a few hours, but eventually got quite well.

Sulphide of Ammonium.—This was diffused in vapor from its solution into the chamber in each experiment.

EXPERIMENT 10.—A large dog was placed in the box, and six drachms of sulphide of ammonium were introduced. He soon suffered from lachrymation, restlessness and vomiting. The vomited matters gave off copious white fumes. There was a peculiar harsh noise during expiration. In five hours he had recovered, and was then removed.

EXPERIMENT 11.—A dog was placed in the box, and half an ounce of sulphide of ammonium. For ten minutes he labored under excitement with lachrymation. He also had some tremor and tenes-

mus. The symptoms subsided, and he was removed from the box in five hours.

EXPERIMENT 12.—A jackdaw was placed in the box, and half an ounce of sulphide of ammonium was introduced. The bird vomited, and the vomited matters were of a yellow color; the beak was separated; the tongue was dry and dark colored at the top. He was much purged, and the ejected matters were liquid. He expanded both his wings to support his body. The respiration became quicker, and he died in two hours.

After death the blood remained fluid; the lungs were congested; the brain was congested. The other viscera were healthy.

EXPERIMENT 13.—Dr. Barker placed a dog in the box with one ounce of sulphide of ammonium. He soon labored under profuse lachrymation and salivation, and became very restless. Within five minutes tenesmus showed itself. The respiration became hurried and difficult. He died within ten minutes.

Twenty-four hours after death the right auricle and ventricle were found filled with quite liquid blood. The left cavities contained a small quantity of fluid blood. The venæ cavæ were distended with fluid blood. Both lungs were deeply congested, and of a dark color. The vessels of the brain were congested. The stomach was distended with food and an offensive gas. It presented a reddened appearance of the mucous surfaces. The other viscera were of healthy appearance.

Carbonic Acid. EXPERIMENT 14.—A hedgehog was placed in the box, and 88 cubic inches ($1\frac{1}{2}$ per cent.) of carbonic acid were introduced. For a quarter of an hour he remained curled up; he then breathed more quickly—sometimes irregularly, and occasionally drew a long inspiration. Soon afterwards he was very restless—running about and trying to escape. He was also freely purged. He became quieter afterwards, and was removed in four hours and a half, upon which he recovered.

Dr. Barker made afterwards several experiments with carbonic acid gas, exposing the animals subjected to experiment to 5, $2\frac{1}{2}$, and $1\frac{1}{2}$ per cent. of that gas. The effects were mainly referable to impeded respiration, but in one instance diarrhœa was the result.

REMARKS.—These experiments have brought before us the effects of the compound impure cesspool atmosphere: and they have shown the specific influence of certain particular gaseous poisons, which alone, or in company, emanate from the cesspool, and the decomposing vegetable heap, to pollute filthy localities.

1. In the first place it cannot be doubted that cesspool emanations are, when steadily inhaled, poisonous. The dogs subjected to the cesspool air were all more or less affected. The symptoms were those of intestinal derangement followed by prostration, heat of the surface of the body, distaste for food, and those general signs which mark the milder forms of continued fever common to the dirty and ill ventilated homes of the lower classes of men.

2. The peculiar poisonous action of sulphuretted hydrogen is well

illustrated in these experiments. The symptoms produced even by the same dose differed in degree in different animals of the same class, the one animal dying from the effects of a dose which was insufficient to do more in the other than produce dangerous symptoms.

The symptoms arising from sulphuretted hydrogen are well marked, and may be considered specific. Vomiting and diarrhœa are the first and most prominent symptoms. The latter is painful; the vomiting is difficult and exhausting, and eventually there is insensibility and entire prostration. When the dose of the poison is at first very large, the prostration and the insensibility are immediate.

The pathology following such poisoning is definite. If the death takes place quickly, the pathological evidence is the evidence of asphyxia; if the poison is long breathed in diluted doses, the pathology is modified, the fibrin of the blood is separated, and the heart is slowly clogged up with fibrinous depositions.

The dose of sulphuretted hydrogen required for the production of the specific symptoms is tolerably well shown. It is clear that so little as 0.428 per cent. is a dose absolutely and rapidly poisonous; that so little as 0.205 per cent. may be fatal; and lastly, that so minute a dose as 0.056 per cent. is sufficient to produce serious symptoms, eructations, tremors, rapid and irregular respiration, extraordinary rapidity of the pulse, and diarrhœa.

3. The effects of sulphide of ammonium, while they differ from those produced by sulphuretted hydrogen, are in themselves sufficiently distinct. Vomiting is a symptom of this poison, without purging, but occasionally with tenesmus. When the dose is very large, death occurs speedily, with quickened and labored respiration. When the administration is kept up in small doses for many hours, the symptoms are those of excited circulation and thirst, followed by rapid sinking. The surface of the body, from being unusually hot, becomes unusually cold. The tongue is protruded, dark, dry, and cold. There are constant jactitation of the limbs, subsultus tendinum, feeble, quick pulse, and ultimately death, which may occur even some hours after the animal has been removed from the poison and placed in the open air.

The pathology after death from sulphide of ammonium differs from that which follows the administration of sulphuretted hydrogen. When the exhalation is prolonged, and the death is gradual, the alimentary mucous surface is changed. The mucous coat is injected and softened in patches. The blood shows no fibrinous separations, but is dark, and either feebly coagulated or entirely fluid. The blood-corpuscles are also much dissolved and changed, and there is congestion of fluid blood in all the vascular organs.

The dose of sulphide of ammonium required for the production of serious symptoms is difficult to calculate; and this, from the fact that when the vapor of sulphide is diffused through a confined space, in which an animal is breathing, there is quickly a deposit on the floor of the chamber of the white bicarbonate of ammonia. This

deposition is so rapid, indeed, that the effect of the poison is very quickly lost, so that constant renewal is required, and the calculation of dose is necessarily rendered obscure, since the animal is not breathing the same dose for any two minutes together.

4. In poisoning by carbonic acid gas, the respiration suffers first; there is prostration, and, if the inhalation is prolonged, diarrhœa. The effects vary with the dose; the instances given above are the effects of a small, long-continued dose. In larger proportions, insensibility, coma, and asphyxia are the results.

The pathology varies. While congestion of the lungs is commonly noted as the leading pathological sign, it is clear that when the gas has been long inhaled in small quantities, this rule is not without its exception; for, in one case, the lungs were found of brilliant vermilion color, and free from congestion.

The effect of carbonic acid gas on the blood is definite; it does not produce the fibrin deposit like sulphuretted hydrogen, nor the complete fluidity of sulphide of ammonium. But there is feeble coagulation, and sometimes a dark color even in the arterial blood. If this gas be breathed continuously for a long time in a very minute dose, the brain suffers from congestion of blood, and the mucous membrane of the stomach is injected and reddened.

When the gas has been breathed for a long time in small quantities, so as not to produce insensibility, the effect does not pass off so speedily on placing the animal in the open air as is generally believed. In one experiment with carbonic acid, the animal, after being exposed for two hours to an atmosphere in which he breathed from the first two per cent. of carbonic acid, was left (not apparently suffering much) with pure air entering freely into his chamber. Yet he died after all.

The smallest dose of carbonic acid required to produce dangerous symptoms cannot be determined absolutely from the experiment of placing an animal in a closed chamber and introducing the gas, inasmuch as the gas is also streaming off from the animal itself. Dr. Barker thinks, however, that the inference is quite fair, that from one to two per cent. of this gas is sufficient, when long inhaled, to produce decided symptoms of imperfect oxidation of the blood, and all the after prostration incident to such interference with the primary act and principle of life.

The symptoms which have thus been noticed as resulting from the inhalation of sulphuretted hydrogen, sulphide of ammonium, and carbonic acid, are sufficient to account for the effects arising from cesspool effluvia, without seeking for any further product from such emanation. Comparing the experiments with cesspool air with those in which separate gases were employed, the inference seems clear, that the symptoms arising from the inhalation of the cesspool atmosphere were due mainly to the presence of a small amount of sulphuretted hydrogen, which gas was always present. If the experiments with the cesspool air be placed side by side with those in which sulphuretted hydrogen, in the proportion of 0.056 per cent., was administered by inhalation, the analogy between the two sets of results will be sufficiently unmistakable.

Therapeutic action of Mercury.—1. It is of use in inflammations, by decomposing the plastic elements of the blood.

2. It is of use in syphilis and other diseases, by eliminating bad matter from the system.

3. It is of use in some diseases, by increasing the natural secretions.

Prop. 1.—*Mercury is of use in inflammations, by decomposing the plastic elements of the blood.* Becquerel and Rodier have shown that in acute inflammations the proportion of fibrine in the blood is increased on the average to 58 in the 1000 parts, nearly double the amount of health. Mercury is *antiphlogistic*; it directly counteracts inflammation by diminishing the fibrine. By impoverishing the mass of blood, it weakens the heart, and thus it both counteracts effusion and assists absorption. It is slower in its effects, but more lasting in its action, than either blood-letting or antimony. Less adapted than the latter for sudden emergencies, because having no immediate but only an indirect power over the heart, it is better suited to cases where inflammatory effusion has already occurred. In the end, mercury diminishes the corpuscles and albumen, as well as the fibrine. It thus leaves weakness behind, and always does some harm as well as good. To use it, is like pointing a battery against a multitude in which our friends are mixed with our enemies, so that on discharging a volley we slay both together.

In the eruptive fevers and in cholera, where the fibrine of the blood is much diminished instead of increased, the employment of mercury to any extent is for this reason perilous. Fortunately, as generally given, in the shape of calomel, &c., it is seldom absorbed in such cases as these; and this is probably the reason why we so seldom hear of its ill effects, though these are commoner than the cures effected by its use.

Prop. 2.—*Mercury is of use in syphilis, and other diseases, by eliminating bad matter from the system.*—It is the deliberate opinion of a considerable majority of intelligent surgeons that there are certain cases of syphilis in which the proper administration of mercury causes a cure; and this cure is a more certain result of the use of mercury than of any other remedy; and further, that it is more effectual, inasmuch as it is seldom followed by secondary or ulterior symptoms.

In dividing under three chief heads the cases of syphilis which may occur in a constitution not previously under the influence of the poison, I am only expressing what I believe to be a common opinion at the present day, and which is very well set forth, as far as I am a judge, in the public lectures of Mr. Lee.

A fresh sore results from venereal infection. During four to five days the inoculated poison must work in the tissue about the surface of this sore, before it can be sufficiently elaborated to affect the general system through the blood. If, during this time, the sore sloughs, then the poison is destroyed and sloughed away before it is ripe. If we produce this effect by caustics, being sure that we are

in time, the same occurs. Then we need not, I think, administer mercury.

In a second class of cases the sore ulcerates. Its edges are rough and jagged. It has not sloughed away; but the poison having ripened, has passed along the absorbents to the glands in the groin. These swell and suppurate, and with the pus the poison is discharged; it does not further affect the system. In such a case, we need not, I think, administer mercury.

In the third case, the inflammation on the surface of the sore is of the adhesive kind. The edges are raised, the surface is somewhat cupped. The whole has a horny feel. There is little irritation; no sloughing. It is the chancre of Hunter and Carmichael, more or less marked. We will suppose that the period of ripening has passed. The poison now infects the blood; it does not stop at the glands or inflame them. It passes straight into the system at large, and a rash declares that the constitution is affected. When a chancre of this kind is destroyed by nitric acid, or some other caustic, then all may go well; but when it has had time to mature, then, I think, we *should* administer mercury. We must introduce the only medicine of which we are thoroughly convinced that it possesses the power of efficiently striving with the enemy who by subtle means has now effected an entrance with our stronghold.

Syphilis, with the eruption, and ulcerations, and necroses, and the cachexy, that result from its working, is obviously a poison which itself decomposes and impoverishes the blood; and it seems to me not unreasonable to suppose that mercury, in its destructive action, seizes first on those parts of the blood which are most liable to putrefaction; that it grapples thus immediately with the fermenting and multiplying virus of syphilis, decomposes it, as well as those materials of the blood on which it has commenced to feed, and eliminates both these and itself together by the glandular outlets of the frame. To cure the corrosion of the vital parts, the mercury corrodes somewhat further and deeper, and sweeps all away. Its use may be compared to the wise plan of blowing up a number of houses to save a city on fire.

To be of any good the mercury must be given while the syphilis is comparatively recent. In the later forms of the disease, called secondary and tertiary, the mischief is already done; the blood is depraved. and a new phase of morbid action has taken the place of the first. Here, iodide of potassium is the remedy, and mercury, if ever given, should be given most cautiously, or in cases where its use was culpably omitted at the first.

From what I have already said, it will be seen that I do not consider it of much importance what plan of administering mercury in syphilis is followed, so long as any plan is carried out effectually. The practice of inunction is very efficacious, but is now unfashionable, uncleanly. The internal use of calomel, &c., is more perilous, but it may be best carried out by giving doses of frequent intervals. The fumigating plan may astonish us by producing a most notable effect just when we least expected it. Mercury should not be given

to produce much salivation. If the mouth is sore only, we know that the system has as much of the mercury as it can hold.

In such cases of syphilis as are common among soldiers and the *habitués* of the out-patient rooms of our London hospitals, we may often pause before we determine to administer mercury. The true chancre, which calls for it, is comparatively rare among those who have been often attacked; and when the constitution has long been accustomed to the syphilitic poison at various stages, and is liable at any time to receive a new infection which shall render our care nugatory, it is better perhaps to abstain from adding to the existing cachexy by so potent a depressing cause as mercury, and to rely most on other more gentle evacuants, on external treatment, and hygienic measures of a simple kind. In such cases as require the iodide of potassium, this may be given with less apprehension. The secondary and tertiary disorders, in which mercury often does little or no good, are in many points to be compared to scrofula, where also, except in small doses, this remedy is contra-indicated, whereas in both classes of cases the preparations of iodine are used with admirable effect.

In other diseases besides syphilis, it is very possible that a morbid poison may be occasionally got rid of in the same manner as I have supposed to be the case here. In itthic, gouty, chronic rheumatic, and dyspeptic disorders, a mercurial cathartic may sometimes eliminate along with itself the decomposed *materies morbi*. This is the action of mercury to which the name of "alterative" is commonly given.

Prop. 3.—*Mercury is of use in some diseases by increasing the natural secretions.*—This medicine increases all the secretions of the body. With regard to the three great glandular outlets, it affects the bowels most, the skin next, the kidneys least. But in most cases where any of these secretions are repressed or diminished, or where general elimination is advisable, mercury may be given with greater or less advantage. It is in common use as a cathartic, but it lowers the system, and should be employed warily. It is of great utility in hepatic dropsy, but generally does harm in granular disease of the kidney.

Of all organs in the body, mercury is most attracted by the liver. It is most difficult to produce salivation in cases of suppuration of that organ. In an instance of chronic poisoning by mercurial fumes, where the individual died twelve months after removal from the source of those fumes, mercury was found in the liver, but in no other organ or part of the body. Mercury increases the secretion of healthy bile. This is not only a matter of vulgar observation and belief, but has been scientifically demonstrated by Buchheim and others. The bile I believe to be *the tonic of health!* the material which performs the same function in the sound system as that which is discharged by bitter medicines in disease. Mercury is a general eliminative; it is also a *catalytic* blood medicine. There are two ways in which it may act in controlling disease. There is probably yet a third way, to which I would call special attention here. Mer-

cury, in small doses, is used with more or less effect in all the diseases which are controlled by quinine; and I can think of no explanation more calculated to account for this than the supposition that the mercury is of use by causing an increased secretion of bile, part of which, required in the blood, and not destined for excretion, is reabsorbed into the blood, as shown by Liebig, and used in the system. In intermittent diseases, in remittent and billious fevers, in many cases of debility, in chronic gout, rheumatism, scrofula, &c.—diseases where quinine is frequently of use, and where the function of the liver is at fault—mercury in small doses is often given with small effect. In such cases we must by no means combine it with opium. This combination may be suitable in some peculiar cases of local inflammation; but it often hinders the proper action of mercury, instead of promoting it, and checks the elimination which is attended with such advantage.

I must now conclude this brief sketch of the action and uses of mercury. Were we to believe all that has been said about this drug, we should welcome it as a cure for all the ills that afflict humanity, the veritable panacea of the old dreamers. Unfortunately we cannot do this. But it is an agent of wondrous properties, a remedy of vast and varied power; perhaps, altogether, the most useful in our Pharmacopœia. It is the very prince of that class of remedies, unfortunately too few, that are capable of entering the system, of grappling with a disease in the blood, and of coming off victorious in the struggle.

Putting aside for the moment its use in the phlegmasiæ and in chronic disease, were it only for its power in syphilis, it would be of the most value to us. The syphilitic poison is connected in some manner or other with about half the diseases of towns. Is it likely to die out? Fordyce, on being asked this question, replied with another—Are men becoming tired in the pursuit of pleasure? The great moral ulcer of our social system, in spite of all the efforts of philanthropists and legislators, is hardly likely to be healed as long as men continue in their present state of mind.

“Audax omnia perpeti
Gens humana ruit per vetitum nefas.

Moreover, it is said, and I think with a fair show of reason, that syphilis is even gaining upon us in London. Is it wise then to do what some would advise, to let the only valuable weapon with which we are armed against it drop through our fingers? The more we know of its real actions, of the mystic processes of its absorption in the system, and of the comparative physiological tendencies of the various forms in which it is administered, the better shall we be able to wield it with skill and effect. In a line of investigation and of patient experiment on disease and remedy lies our best and wisest course; and so long as we steadfastly pursue this widening path, so long at least we physicians can say, that at the bottom of our box of Pandora there lies a Hope which is not yet flown.—*London Lancet*.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

A Manual of Psychological Medicine: Containing the History, Nosology, Description, Statistics, Diagnosis, Pathology, and Treatment of INSANITY. With an Appendix of Cases. By JNO. CHARLES BUCKNILL, M.D., Land. Licentiate of the Royal College of Physicians; Fellow of University College, London; Fellow of the Medico-Chirurgical Society; Medical Superintendent of the Devon County Lunatic Asylum, and Editor of the Asylum Journal of Mental Science. And by DANIEL H. TUKE, M.D., Licentiate of the Royal College of Physicians, London; Lecturer on Psychological Medicine at the York School of Medicine, and Visiting Medical Officer to the York Retreat. Philadelphia: Blanchard & Lea. 1858. (For sale by Riley & Co.)

The want of a systematic treatise on Insanity, adapted to the use of practitioners and students of medicine, has long been felt. Pritchard's treatise has hitherto afforded the desired information; but it is a quarter of a century old, and is now out of print.

Aware of the fact that no amount of reading can render it safe to dispense with clinical knowledge of mental disease, the aim of the Authors has been to supply a text-book which may serve as a guide to the acquisition of such knowledge, sufficiently elementary to be available, and sufficiently modern to answer the demands of the practitioner.

The work is divided into *ten* chapters.

Chap. I. Historical Sketches of Insanity among the Nations of Antiquity, mainly in regard to its extent.

Chap. II. Opinions of Ancient Medical Writers on the Treatment of the Insane.

Chap. III. Modern Civilization in its bearing upon Insanity.

Chap. IV. Amelioration of the Condition of the Insane in Modern times, especially in regard to mechanical restraints.

Chap. V. Of the *Definition* of Insanity and of Classification.

Chap. VI. Of the various forms of Mental Disease.

Chap. VII. The Statistics of Insanity.

Chap. VIII. Diagnosis of Insanity.

Chap. IX. Pathology of Insanity.

Chap. X. Treatment of Insanity.

The *Appendix* gives cases illustrated by portraits, and also cases illustrating treatment.

We scarcely know from which of the above chapters we should make extracts that might convey an idea of the work. Chapter V. proposes a definition of Insanity ; and for a moment we will look a little into this.

Of Insanity, it is certainly, in the present state of our knowledge, impossible to give a definition. What Dr. Johnson said of any one who should attempt to define poetry, or of those who have attempted to define anger, love, etc., may very properly be applied to him who should attempt the definition of Insanity—namely, that such attempt will only show the narrowness of the definer. “How much more difficult then must the task be when we are required, in the compass of a paragraph, to define a disease which in turn assumes as many forms, not only as there are fundamental faculties liable to disease, but as many forms as these combined in endless variety can assume, and still further varied according as one or more of them may be exalted, depressed, or obliterated !” While all that may be said, therefore, in a few lines, or in a lengthy paragraph, or even in a chapter, by psychologists, in the way of definition must necessarily come short of conveying ideas not open to criticism, we may nevertheless draw something from those who have made efforts in this line that will be of service in appreciating mental alienation.

Lock says : “Madmen do not appear to have lost the faculty of reasoning, but having joined together some ideas very strangely, they mistake them for truths, and err as men do who argue from wrong principles.”

Cullen says : “Insanity consists in a lesion of the intellectual faculties without coma and without pyrexia.”

Combe : “It is a prolonged departure, and without an adequate external cause, from the state of feeling and modes of thinking usual to the individual in a state of health that is the true feature of disorders of the mind.”

Lelut and *Spurzheim* : “Incapacity of distinguishing diseased functions ; a lesion in the association of ideas ; a disorder of the passions and will without the patient’s consciousness of such disorder.”

Connolly : " An impairment of one or more of the faculties of the mind, accompanied with or inducing a defect in the comparing of faculty."

Guislain : " It is a derangement of the mental faculties, morbid apyrexial and chronic, which deprives man of the power of thinking and acting freely as regards his happiness, preservation, and responsibilities."

Bucknill : " A condition of the mind, in which a false action of conception or judgment, a defective power of the will, or an uncontrollable violence of the emotions and instincts, have separately and conjointly been produced by disease."

" Mental health, observes a Continental writer, " consists in that state in which the will is free, and in which it can exercise its empire without any obstacle. Any condition different to this is a disease of the mind."

Abercrombie : " The peculiar character of insanity in all its modifications appears to be, that a certain impression has fixed itself upon the mind in such a manner as to exclude all others ; or to exclude them from that influence which they ought to have on the mind in its estimate of the relation of things. This impression may be entirely visionary and unfounded ; or it may be in itself true but distorted in the application which the unsound mind makes of it, and the consequences which are deduced from it. Thus a man of wealth fancies himself a beggar, and in danger of dying of hunger."

We have thus glanced at the efforts made to define Insanity ; and while it seems very obvious that the difficulty has not been compassed by any one of those who have written out their opinions, yet when all the definitions are considered, the essential points of the disease are pretty well set forth. The difficulty of a definition is simply its impossibility.

No less troublesome than Definition has been a satisfactory *Classification*. The work before us passes in review the classifications of the ancient writers, beginning with Hippocrates, the Father of Medicine, who recognized three distinct conditions of the mind : *Mania*, *Melancholy*, and *Dementia*. Celsus had three kinds of Insanity : *Phrenitis*, *Sadness*, and a form which he divides into two genera. " For some err in having false images not in their whole mind, as Ajax and Oristes are represented in poetic fables ; in others the whole mind (or judgment) is affected." The modern systems of classification are also noticed. We have the very ingenious and elaborate one of Arnold ; that of Mason, Good, Pinels, Esquirols,

Guslains, Connalys, Pritchards, etc. These are so generally known that a statement of them becomes unnecessary. The work, after considering all the above systems, comes to the conclusion, that although not based on any certainly proved physiological ground, a classification something like the following is the most useful :

Disorders of the Mind, involving

I. The *Intellect*. II. The *Moral Sentiments*. III. The *Propensities*. Thus :

Class I. *Intellect*.

Order I. Idiocy, Imbecility.

Order II. Dementia, Monomania.

Class II. *Moral Sentiments*.

Order I. Moral Idiocy, Moral Imbecility, Melancholia Exaltation.

Class III. *Propensities*.

Order I. Mania, Homicidal Mania, Suicidal Mania, Kleptomania, Erotomania, Pyromania, Dipsomania.

There is a very interesting Section on the examples in Ancient History of persons who were insane, or who feigned insanity, including references made to the disease by medical and other writers. The feigned *madness* of Ulysses, immediately prior to the Trojan war, should be regarded as the earliest reference in antiquity to the existence of mental disease.

The instances of King David and Ajax—the former of whom feigned dementia with success, and the latter who was seized with madness because the arms of the dead Achilles were awarded to Ulysses, and who slaughtered sheep and oxen under the illusion that they were the sons of Atreus, who had favored his rival—are perhaps familiar to most of our readers. “*Plato*, in the *Phædrus*, observes, the greatest blessings we have, spring from madness when granted by divine bounty. For the prophetess at Delphi and the priestesses at Dodona have, when mad, done many and noble services for Greece, both privately and publicly, but in their sober senses little or nothing.” Again, in his *Timæus*, “*Plato* makes several other allusions to madness. Thus, after speaking of bodily disease, he goes on to say, in the above manner are the diseases of the body produced; but the diseases of the soul resulting from the habit of the body are as follows: We must admit that the disease of the soul is folly, or a privation of intellect; and that there are two kinds of folly, the one madness, the other ignorance. Whatever passion, therefore, a person experiences that induces either of them, must be

called a disease. Excessive pleasures and pains are, however, what we should deem the greatest diseases of the soul, for when a man is over elevated with joy, or unduly depressed with grief, and so hastens immoderately either to retain the one or fly from the other, he can neither perceive nor hear anything properly, but is agitated with fury, and very little capable of exercising the reasoning power."

Plato has also enunciated the modern doctrine concerning criminal responsibility, which some of our erratic phychologists claim as one of the improvements of modern times :

"And indeed, it may be asserted that all intemperance in any kind of pleasure, *and all disgraceful conduct is not properly blamed* as the consequence of voluntary guilt. *For no one is voluntarily bad*; but he who is depraved becomes so through a certain bad habit of body and an ill governed education. All the vicious are vicious, through two most involuntary causes, which we shall always ascribe rather to the planters than to the things planted; to the trainers rather than to the things trained." Again: "There are two kinds of madness; one arising from human diseases, the other from an inspired deviation from established custom."

We have thus given a sketch of what the work presents of the opinions entertained by ancient writers. We might extend this part of our notice much further, but our space will not allow us to do it at present.

Chap. III. discusses *the bearing of modern civilization on Insanity*. The general result of this inquiry is the conviction of the Authors, that, *other things being equal, civilization* does on the whole tend to render men more liable to mental disease.

Nothing is perhaps more difficult than the work of making out the proportion of the insane population, whether in regard to various countries, or to the same country at different periods of its population. Too often the basis for such calculations are the numbers of patients in lunatic asylums. Such a calculation, where lunatic asylums are even provided, makes the number vary from one in one thousand to one in thirty thousand, and therefore is fallacious. "The tendency," observes Dr. Farr, "in a class is expressed by the proportion that *become* insane." To get at this requires an uncommon amount of care. In France the number of insane has been estimated at 1 in every 795; in Norway, 1 in 551; in the Rhenish Provinces, 1 in 666; in England and Wales, 1 in 577; in Scotland, 1 in 390. The results of insane and idiots in Massachu-

setts, according to the census of 1854, show 1 insane person to every 427 of the population, and 1 idiot to every 1,034.

There is no evidence that goes to show that the use of the intellect when confined to a reasonable range, predisposes to insanity. Exercise of the brain within certain limits not only strengthened it, but conduces without doubt to the general health and good feeling of the organism. Highly civilized nations, we have no idea, owe their greater tendency to insanity simply to mental culture. Such habits are as normal to the American or European brain, as are the nomadic to the brains of the Syro-Arabian. Incident, however, to European civilization with its attendant knowledge and education, we have social conditions which offer prizes dependent solely upon intense intellectual competition, unparalleled in any former age, and of course, unknown among barbarious nations. As Plato has well remarked, it is excessive pleasures and pains that wear out the soul. Dr. Guslain has remarked that "the people of European civilization and North American civilization, are, as it were, in a state of continual intoxication—intoxication of the emotions—intoxication of personal dignity—intoxication arising from constantly renewed impressions. It is not thus with those who approach closely a state of nature—men who live far from what we call "the world." The characteristics of such nations are, less affection, uniformity of manners and habits, the unchangeable character of social institutions—wants much more limited—the being inured to privations, a life in accordance with the instincts, a savage life which enables them to support pain, to fortify themselves against suffering, to brave peril, and to contemplate death itself with courage and tranquility of mind."

Much of the insanity of highly civilized communities owes its origin, perhaps, not so much to the work or impulses to which the mind is subjected in adult life, as to the manner in which it is crippled when young by the popular systems of education. *Infant* schools; or what amounts to the same thing, the sending of children at a very early age to school, and subjecting them to the most rigid discipline, the offering of prizes for mental efforts, produce in many instances lesions that manifest themselves but slightly at the time, but which "crop out" in after life with the presence of exciting causes, that under other circumstances would have been powerless. Our disposition to make the most out of everything induces us to work the clay before it is properly tempered.

At the present time it is pretty well ascertained that insanity proceeding from *moral* causes predominate very much over that from physical causes. "Fear, grief, reverses of fortune, domestic trouble, pride, ambition, great successes of any kind, religious fanaticism, political commotions, may be set down as being much more prolific in the production of mental disturbances than lesions of structure."

"I am not one of those modern philosophers," says Dr. Rush, "who derive the vices of mankind from the influence of civilization; but I am safe in asserting that their number and malignity increase with the refinements of polished life. To prove this, we need only survey a scene too familiar to affect us; it is a bedlam, which injustice, avarice, pride, vanity, and ambition have filled with inhabitants."

Here in America we have humanity existing in two conditions very widely contrasted—the one a race often improperly called Anglo-Saxon, possessed of proclivities, tendencies, and instincts that force the intellect up to every thing of which it is capable, and not satisfied without a religion equally exacting on the morals—the other race which passes the time principally in the open air, engaged in hunting, fishing, and other pursuits requiring much physical and but little mental exertion. The savage but seldom sheds tears, knows little of the anxieties and sufferings connected with poverty, and never exhausts his brain by thinking. Here then it would seem that we ought to have, as well as any where, the elements for a comparison of the relative predisposition of the two races to insanity.

"After much inquiry," says Dr. Rush, "I have not been able to find a single instance of *fatuity* among the Indians, and but few instances of melancholly or madness." "Dr. Lillybridge, of Virginia, under a government appointment, paid special attention to the diseases of the American Indians, yet he neither heard nor saw a case of madness among them." Dr. Butler, who lived twenty-five years among the Cherokees, never witnessed a well marked case of insanity.

Equally favorable to the solution of the question before us are the circumstances connected with Egypt. As the Nile is ascended from the Mediterranean, the traveler passes first through a country inhabited by a race formerly the most scientific of any on the earth, a race which, if judged by the monuments it possesses, has never had an

equal. Cairo, the capital of Egypt, possesses a lunatic asylum. Proceeding from Cairo, where the civilization is at its height, the proportion of lunatics, it is said, gradually diminishes. Dr. Moreau, of Paris, who traveled in Africa for the purpose of inquiring into the number of the insane, states that high up on the Nile, the disease seemed to run out. He did not meet with a single case in all Nubia. Several of his friends that visited Sennaar, Cordofan, and Abyssinia, found only a few imbeciles. Cousin, in his excursions on the coast of Guinea, over an area of 2400 miles, only met with a single individual who was insane. It is further stated by Furnari that the number of insane among the natives of Algiers, and the Arabs of North Africa, is far below that of Europe.

In the South Sea Islands the disease seems to be rare. Capt. Wilkes, commander of the U. S. Exploring Expedition, says: "During the whole of my intercourse with the natives of the South Sea, I met with no deranged person." China, it is said, has a comparatively small number of insane. This is attributed to the peculiar character of the Chinese civilization, which has led to a stereotyped and unexciting life, and to the limited extent in which the inhabitants indulge in alcoholic liquors.

In coming to the conclusion that a high order of civilization favors insanity, the greater facilities which exist in civilized countries for obtaining a knowledge of the numbers of the insane should not be lost sight of. Making due allowance, however, for this, the conclusion is irresistible that insanity rises to its maximum development among the civilized nations of Europe and America. Favoring this conclusion also are the circumstances that children, and inferior animals are but slightly liable to insanity.

We have in the work before us a very valuable table illustrating the influence of *Occupation* on mental health. Thus, in every 10,000 lunatics in asylums it appears that we have 53 merchants, 43 lawyers, 42 physicians, 28 clergymen, 28 artists, 21 musicians, 17 tailors, 16 shoemakers, etc.

This table, the first of the kind constructed, may approximate pretty closely to the truth. Merchants, of those enumerated, seem to be in the largest proportion. Intensity of application, connected with sudden reverses of fortune, may explain their greater liability. Lawyers and physicians are nearly twice as liable as clergymen. Then again, artists much more liable than tailors and shoemakers. What is there in a physician's life that makes him more than a cler-

gyman liable to mental disease? The same question might be asked with reference to lawyers. Why the mere mechanic—a shoemaker, for example—should be less liable than artists is easily seen. The table would seem to make it appear that occupations predispose just in proportion to the required investment of intellect. But is there really less intellect required for the clergyman, than for lawyers or physicians?

Proportion of Recoveries.—The statistical tables go to show the proportion of recoveries calculated on the *admissions*. Dr. Thurnam says: “As regards the recoveries in asylums which have been established during any considerable period, say twenty years, a proportion of less than 40 per cent. of the admissions is under ordinary circumstances to be regarded as a low proportion, and one much exceeding 45 per cent. as a high proportion.”

The proportion of recoveries in recent cases, cases admitted for the first time within three months after the first attack, is 73 per cent. First attack above three, and within nine months, 43 per cent.

As regards *Sex* in relation to recovery, it has been found that there is little if any difference between males and females.

Relapses.—At one time Esquirol and others concluded that out of 100 recoveries 10 relapsed. Later researches go to show that the liability to relapse after first recoveries cannot be estimated at less than 50 per cent, or one in every two cases discharged recovered.

Diagnosis of Insanity.—This is a very difficult subject. Perhaps no class of diseases are so various in their manifestations as insanity. “No diseases present such an infinite variety of light and shade belonging to their own nature, or to their intermixture with other maladies, or to the influence of temperament, of individual peculiarities of habit, or of social position. * * * The diagnosis of most all other diseases depends principally upon weighing the evidence afforded by weighing physical signs and symptoms, upon evidence addressed to the senses; but in mental disease it is for the most part dependent upon evidence which is cognizable by the intellect alone, and upon data which the senses furnish to us only at second hand. * * * The physician must not only be a physician but a meta physician, not indeed in the almost opprobrious sense of this term, but in that better sense which designates a lover of truth, seeking to ascertain not the essence of the mind or any other unattainable abstraction, but the *laws* of mind, which are as regular as any other

natural laws, and the knowledge of which offers to philosophy a wholesome and legitimate object of research."

While there is much in this chapter that we should be pleased to transfer to our pages, we must, for the present, be satisfied with the following in regard to the *Physiognomical* expression of the insane :

"Thus in *Melancholia* the facial expression is emotional; while in *mania* it is emotional and intellectual, and is marked by the characteristics of changeableness and inconsistency. In *Dementia*, on the other hand, all expression has disappeared, the vacant stare and the meaningless lineaments indicating the loss of thought and desire. It is only necessary in this connection briefly to advert to the great peculiarities observable in the face of general paralytics, the trembling lips, the drooping brows, the features expressive of a mixed state of imbecility and excitement, the eyes with pupils of unequal size, together afford to the experienced alienist unquestionable testimony of the existence of this most hopeless of maladies."

A System of Human Anatomy, General and Special. By E. WILSON. Author of the "Dissector's Manual," "A Treatise on Diseases of the Skin," etc., etc. A New and Improved Edition, American, from an Enlarged London Edition. Edited by WM. H. GOBRETCHT, M.D., Professor of Anatomy in the Philadelphia College of Medicine; Fellow of the College of Physicians, Philadelphia, etc., etc. With Three Hundred and Ninety-seven Illustrations on Wood. Philadelphia: Blanchard & Lea. 1858. (For Sale by Riley & Co.)

This is a *new* and very excellent edition of a work that has been received with very distinguished favor both at home and abroad. It contains additions, somewhat extensive, by the Author, while the American Editor has added an Introductory Chapter of a general character, containing such preliminary information as appeared necessary to him to facilitate the study of anatomy. The number of wood-cuts has also been largely increased by the addition of one hundred and thirty illustrations selected from various authorities.

An examination of the work shows that the utmost care has been

employed to render the text correct and verify all the references to the illustrations.

It is unnecessary to say a single word in commendation of this work. As a hand-book it has heretofore given satisfaction, and as a consequence attained to a more general use than any work of the kind in the country. The additions made to it, in the present edition, by the Author and American Editor, enhance its value.

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

"PLEASE EXCHANGE."—From time to time we have received journals purporting to be of a medical character, with the above caption on the cover. As a general rule we have complied with the request. Indeed, we may say that it has given us great pleasure to exchange our humble and feeble efforts, in what we have been taught to believe a righteous cause, for the labors of others. Who could resist a custom that has had so much to do in making people wiser and better? The thing, when thought about a little, turns out to be of no mean character. The ancient Greeks, who reached the highest point of culture, exchanged freely with their neighbors. The Romans, Persians and Egyptians, did the same; and while it may be predicated as a fact that the civilization of each of these nations of antiquity owes its success to the circumstance that this was but an expression of its instincts; or, in other words, that each civilization was in conformity to the national idiosyncrasy, it is also equally certain that those nations that kept up an intercourse with each other, were not only the most prosperous in worldly matters, but the most wise and powerful.

Impressed, we might almost say intoxicated, with the value and importance of the measure under consideration, modern nations have amplified it and perfected it, until we now have interchanges with almost the whole globe. A few nations have been selfish, have imagined that nothing was to be gained from extraneous light, that they had within themselves all of the essentials of sociology. Later, however, these have yielded to the dominance of the feeling

in favor of the measure, and, as a consequence, the regard of it is about to be as broad as humanity itself.

We need not stop to discuss in detail the advantages that have accrued to mankind from an interchange of ideas. It is enough to know that the policy of the measure is axiomatic. Now, no measure, whether national or international, lasts any length of time unless founded on utility. This, therefore, lies at the foundation of all "exchanges."

We have made these remarks in order to say a word or two as it regards the disposition we make of requests to "exchange." We, of course, take up the new visitor and look through it to see from whence it comes, and what it advocates. If devoted to truth, to science, we place it upon our "exchange list;" if to the support and elaboration of a humbug, or some partial system, we throw it under the table for wrapping paper. Our feeling has been, simply, that such prints, however highly they may be regarded by those engaged in conducting them, *are of no use to us.*

These remarks have been called forth by a new journal that has just come to us for exchange—"The American Homœopathic Review, New York, October, 1858." We treated the new comer with becoming respect when it made its appearance, by reading its Introductory, and observing how it "defined its position."

In its Introductory we have the following: "Fully aware of the difference existing among Homœopathists, we are nevertheless certain that the doctrine of '*Similia similibus curantur*,' is a common ground upon which all can meet, and upon this principle the Review takes its stand."

Differences of opinion upon everything else may be tolerated, except in regard to this doctrine of *Similia similibus curantur*. This is the "common ground" upon which the fraternity can meet and sympathize with each other.

Now, it looks to us, that this bond of union called a "doctrine" in one place in the above quotation, and a "principle" in another, possesses nothing that is strong enough, either to hold men ordinarily endowed with intellect together, or that ought to serve to direct in the cure of disease. Generalities are dangerous things when made from the lights of science; and what must they be when emanating from the rickety movements of a mind, the delight of which was to dwell for a life-time in regions where fancy is substituted for observation, and sophistical reasoning for experiment?

As we have seen, we have had the assertion "like cures like," dubbed a principle. Truly "principles" must be at a discount when confounded with such nonsense. Once a *principle* signified "*a truth*," admitted either without proof, or considered as having been before proved. Who has ever proved the assertion, "*Similia similibus curantur*?" Do the advocates even know what the word *prove* means? What we have seen of their attempts to prove their motto, amounts to the grossest ignorance of the system of reasoning. Because a recovery follows the administration of the millionth of a grain of calomel, or indeed of calomel in any quantity, or the administration of any other drug, it by no means proves that the result was due to the article administered. Calling the phrase "like cures like, a "*doctrine*," is in better taste. This means nothing without a qualifying word, and leaves each at liberty to prefix any that he may think proper.

Again, what advantage to us, or to any one else, to exchange with a journal that advocates the doctrine of "*attenuation*" in the administration of drugs?—a doctrine in opposition to every well conducted experiment that ever was made, not less than to the plainest maxims of common sense. In food, in drinks, in poisons, and in medicines the effects are, other things being equal, in proportion to the quantity used. On an ounce of food daily, an adult would starve. The organism would not tolerate for any length of time such a violation of natural law. Arsenic, or any other of the articles usually called poisons, may be given in small quantities with impunity. A certain amount of quinine is required to interrupt the paroxysms of an intermittent. Now, in each one of these instances, the quantity is regulated by natural laws, and hence any system that ignores this fact, is simply not entitled to the time necessary to expose it.

In conclusion we may freely admit that there is room for differences of opinion on materia medica; but there is no room for the flagrant outrages of Homœopathy—a system that has nothing in it but distempered imagination.

Consulting with Homœopaths.

While we have up the subject of homœopathy we will embrace the occasion to notice a question that has lately been up for discussion—the propriety of holding consultations with those engaged in the practice of homœopathy. We are aware that there are various ways of assisting in the spread of humbuggery—that, really, there

is nothing so well calculated to give currency to a false worthless system of medicine as efforts to expose it; and, as a consequence, we have long ceased to breathe a single syllable in the presence of the people against any of the enterprises got up to swindle them. The attempts by medical men to shield them, has only had the effect of exposing more square inches of skin to the lash. Reasoning on medicine the people don't understand; and if the physician should tell them of the nonsensical or dangerous character of a new fraud that had just been got up, he would be looked upon as a persecutor. As a result of this state of things, every quack who makes his appearance, and every nostrum offered for sale, have to be *worn out* by the people, it matters not at what cost of health or life.

But notwithstanding the hopeless condition of the masses with reference to quack systems, it seems clear that medical men should so demean themselves as not to be responsible for the results. Taking this simple view of the subject, we can see no propriety in consulting with Homœopathists. What good can result from it? The Homœopathist, if sentimental in his opinions, would stick to them. And could a regular physician be capable of anything else? No compromises could take place. It would be just as easy for a regular physician to compromise with a Spiritualist as with a Homœopathist. While, therefore, the patient could be in no respect benefited by the junction—or even fusion, if it were possible—of the two systems, the profession could not fail to be injured. If a medical man in good standing in his profession should meet a Homœopathist in consultation, the people, who are always an attentive audience in such cases, would no doubt be pleased. They would say, “Well, that is a good doctor; he is sensible; he rises above the little insignificant prejudices of his fraternity.” All this, of course, would sound very nicely in the ears of the physician, and he would go home apparently satisfied. But what would be the effect? The people would come also to other conclusions. They would conclude that the Homœopathist was a pretty good doctor, or the regular physician would not have met him as an equal; and that after all there is something in that kind of practice. Moreover, perhaps, one of the patrons of the regular physician in time becomes indisposed, and having heard of what has taken place, he sends for the Homœopathist, thinking he would rather at the commencement of his attack take sugar pills than calomel, and knowing, that, if the sugar pills fail, he can at last have them compounded with the calomel.

We have thus put a case not at all unlikely to occur; and it would be very well, if it was only true that the physician who degrades himself by consulting with a Homœopathist should be the only one of the profession affected. Such conduct, as before remarked, affects every member of the profession; and our opinion is that there is not only no excuse for consultation with Homœopathists, but that it is a reasonable cause for excommunication. In extenuation, it is sometimes said that the physician who submits to the condescension occasionally saves the patient's life. Supposing this be granted he, by the act, in all probability endangers the lives of hundreds of others.

The character of the people who employ Homœopathists.

It is not, as might be supposed, the ignorant alone of our population who are the subjects of this delusion. Such have generally enough of *instinct* about them to resist the absurdity. It is those who profess to be enlightened—to have education enough to judge between systems—that are the dupes. Persons of notoriety in literature, of character in the learned professions, and occupying important positions of State, have yielded with equal facility to the process of wool-pulling-over their eyes. With only capacity to appreciate the imperfections of the regular system, and dilate upon the abuses of a few of the articles of the materia medica, these notables have ignored all the advantages arising from the study of the elementary sciences of medicine and the combined experience of the most learned men of ancient and modern times, and passed with a reckless, giddy stampede over to the support of systems founded on nothing but imagination and avarice.

No kind of an education except that of a medical, seems to serve as a prophylactic against quackery. It is not very difficult to imagine that faults enough in the brain of Poets might be found to account for their erratic course. Aristotle regarded them all as having the pate partly cracked, and as being able but occasionally to get out anything with sense in it. But it is not so easy to explain how it happens, that individuals, having the advantages of early education, and possessing what are regarded as talents in their line, with common sense, and knowledge enough of human nature to work their way from humble positions to that of legislators or governors of States, should be led with the docility of lambs to the slaughter, by the most transparent mountebanks of the country. The drama of

life, however, is full of just such instances. Some of the leading States of the Union are at the present time governed by men who believe in Homœopathy, and who endorse it by giving it their patronage.

Such being the case, the conviction is forced upon us that nothing short of a medical education will enable an individual to appreciate medical science, or obtain for himself in medicine that which is most likely to benefit him.

What is the remedy for this almost universal imbecility, with reference to Medicine? More democracy, in allowing every one who thinks proper to tamper with human life? Or should our government do as other civilized governments have done, assume at once the true ground, by making all men minors with regard to their maladies, and provide them with the assistance dictated by science? We intimated that civilized people have done this. They have, everywhere, except in America. Some of the half civilized have also enacted laws that tend to the same result. In Chili, for example, no one is allowed to practice medicine until he has submitted to an examination on all the departments. Such a law in Ohio would, to say the least of it, elevate us to the level of the demi-civilized in other portions of the globe.

We are aware that many will say that the measure we have indicated has been already tested in several of the States. This is simply a mistake. An efficient law on the regulation of the practice of medicine has never been enacted in America. We have had laws, but they have done no good. We want a law recognizing the fact that all men are naturally imbecile in medical matters, and, that they need to be provided for as a parent provides for the child—that left to themselves they go into the fire.

Synopsis of Remarks made by Prof. Dawson at the opening of the present Session of Starling Medical College.

YOUNG GENLEMEN : It gives me pleasure, on behalf of the Faculty, to welcome you to the halls of Starling Medical College at its present session. You come as pupils to get the knowledge necessary for the duties of an arduous responsible profession. And I may say to you in advance, that you will find your teachers of

the several departments that make up the course, always ready and willing to serve you to the utmost of their ability. They will prepare for you daily the scientific material that it is necessary you should absorb and assimilate as a foundation for the work before you. But do you appreciate the new relation in which you have placed yourselves? Are you aware that for a time you have mortgaged yourselves, head and heels, eyes and ears, to your teachers—that they have the sole right to your time, and to the use of all the avenues to your understanding? Such really ought to be the case; and it is only necessary that you should heartily recognize something of the kind, in order that, at the close of our interview, we may have the best possible results. You ask, what is Medicine? It may be replied, that it is neither an art nor a science; but art and science combined. You ask about the extent of it; it may again be replied that there is scarcely an art or science, but what either enters into the elementary composition of Medicine, or that does not contribute to it in some way or other. A medical man is not merely a physician, he is a physicist, a naturalist—he is not merely a mechanic, he is also an artist. The administration of a dose of rhubarb, or the adjustment of a fractured bone, is often properly performed by the novice. No one, however, but the medical man can give the *reasons* for his practice. Why are all the natural sciences necessary to a medical education? Simply, because man is in some way or other related to them all. He is the subject or object of them all. In the Social state, he is creator and destroyer. In Nature he is the merest creature.

Our *course*, however, is not intended to be commensurate with the limits indicated as belonging to medical science. We have for the present to content ourselves with a few of the essentials—a little of the ground-work, divided up into departments. We have Anatomy, Chemistry, Materia-Medica and Therapeutics, Surgery, Obstetrics, and Practical Medicine. Human Anatomy is but a very insignificant part, you will observe, of Zoology. Chemistry, that explains the action of atom upon atom, and all the circumstances by which that action is affected, is the mere commencement of a knowledge of inorganic matter. Materia-Medica instructs you in very little that is known of the kingdoms possessing healing properties. Surgery only attempts to make you acquainted with the injuries sustained by the human body, and the modes by which these are most likely to be repaired. The surgeon has no time to speak of the general subject

of the injuries of organized matter and Nature's method of repair. The obstetrician has to content himself with an explanation of human parturition, its accidents, etc. He has no time for the great subject of *Conjugation* as it occurs among the lower plants and animals, and the variations that obtain as we rise in the scale of the two kingdoms. Practical Medicine has of necessity to be confined to a few plain precepts on the habitudes and cure of disease; and like enough these will not fit more than one case in fifty which the physician in after-life is called upon to treat.

Such, young gentlemen, is a synopsis of what we are compelled to present to you as an apology for Medical Science. You say it looks to be comparatively meagre. We agree with you. But it is the most we can do until "the length of our days are increased."

Permit us for a moment to anticipate some of the popular objections to the inquiry in which you are about to engage—objections for aught we know some of you may have imbibed. A general one is this: "*Medicine is uncertain.*" So it is; and so is everything else with which mankind has anything to do. We are absolutely certain of nothing in this world except the works of the Creator. You know the doctrines of the ancient philosophers on this subject. The modern philosophers have not improved upon them, except in verbiage.

The trouble has always been in the methods of inquiry. With earlier thinkers the *Rational* System predominated. This culminated with Aristotle, the largest head of antiquity; and the influence of this man was so great that his method obtained currency for twenty centuries after his death. Aristotle erred in making the machinery of the Syllogism the test of truth, rather than the material which entered into the Major proposition. The Rational System of the ancients is the same as that now used in Germany in getting out new theories on psychology, and new systems of medicine. To this system, indeed, are we indebted for all the nonsensical trash with which medicine and literature have been inundated from Hippocrates to the present day. You inquire, how has all this happened? Because, reasoning is a process understood by but very few, and by those who do understand it, it is easily corrupted. The fault of Aristotle is the prevailing fault of the present day. The process really requires that we begin with axioms, in order to have axioms in the conclusion.

Those who have observed the tendency of things at the present day will, however, notice that we are drifting away from the *Rational System*—the method that has been productive of so little truth and so much speculation. Reasoning as a means of getting at Nature's laws is now at a large discount. A new era, that has had quite a number of Johns the Baptist, has dawned upon us. Its distinguishing characteristic is that it credits in scientific inquiry nothing but the results of the senses, *phenomena*. A work some years since (Bartlett's *Philosophy of Medicine*,) made its appearance in our country, proposing to ignore everything except *facts events*, and *phenomena* in medical investigations. This author, although little heeded at the time, made a great stride from the land of cob-houses. A writer of much more calibre, though not more astute as a thinker Comte, the French philosopher, in a very able work entitled *Positive Philosophy*, eschews everything in scientific inquiry except the knowledge obtained by the senses. Nothing according to him is entitled to credit without it has passed under the review of these sentinels and been endorsed. *Phenomena*, are his material of science. The most reliable medical men all over the world are now imbued with the same feeling. They are every day engaged in fanning from medicine its chaff—in reducing its component parts to the things, and those alone brought to it by *observation*, and *verified by experiment*.

Such a method you would suppose ought to be productive of certainty. It would seem so. The certainty, however, is relative. The method implies *accuracy* in the senses. Without accuracy here the phenomena must be open to doubts. Now it turns out that the senses have a little of the trouble about them of the reasoning faculty. The latter has its *sophisms*, the former their *illusions*. No one can see correctly until his eyes are disciplined, and no one can hear rightly until his ears are educated. The incapacity of the senses is at the foundation of many of the discrepancies of science. We have no time to elaborate here. But we have said enough to hint to you the general imperfection of methods; and consequently the imperfection of results.

Absolute certainty being simply an impossibility in any science, we all have to content ourselves with *probabilities*. And it may with great propriety be predicted that these rise as high in Medicine as in any of the learned professions. There is, therefore, no reason why our calling should be singled out for reproach.

A thought or two on other matters. Socrates was put to death for exposing the folly of the Athenians; and Diogenes died prematurely in trying to set his countrymen an example on economy and virtuous habits. Notwithstanding all this, we will venture to suggest, that if any of you are the subjects of bad habits, you should leave them off at once. It is not necessary that you should possess the self-denial of the Cynics, but it is necessary that the excesses of the flesh should be kept in abeyance to the function of intellection. The studies before you lead to duties, for the performance of which, the highest powers of the mind, and these stretched to their utmost extent, are required. Questions will present themselves for solution very different from what occurs in physical science in its more simple material forms. Phenomena mental and material arise, with relations complex and occult to be reasoned upon and resolved, not according to the laws which obtain in inorganic matter, either in molecules or masses, but in such a way as will apprehend and appreciate the influences exerted on inorganic matter by adding to it the principle of life.

Permit me, in conclusion, to allude to another matter. You are very singular young gentlemen, if you have not shared, with the rest of us, more or less of the inconveniences connected with a light purse. Those it happens, who aspire to become members of the medical profession, are seldom if ever the subjects of wealth—have to worry along in early life with difficulties and privations. This should discourage no one. Ninety per cent. of all the great men—men who have distinguished themselves in letters and figures, important discoveries, and useful inventions—have been of humble origin. Indeed, it seems necessary to greatness that all the trials and deprivations of life be actually experienced. No one ever reached the top of the Egyptian pyramid, Cheops, without having taken the first steps.

BELMONT MEDICAL JOURNAL.—We take great pleasure in announcing the appearance of this new Journal, and cordially accede to its request, "Please Exchange." It is edited by Dr. Afflick, and published at Bridgeport, Ohio. The numbers we have received are filled with good practical matter, such, we should think, as would please its readers.

MEDICAL AND SURGICAL REPORTER.—This is the present title of that which was formerly the New Jersey Medical and Surgical Reporter. Its Editorial conduct having recently been transferred to Philadelphia, had the omission of a part of its name. Its Editor, Dr. S. W. Butler, has been eminently successful as a medical journalist. Thus encouraged, he proposes to supply the profession with a weekly, into which he has merged his former monthly. We greatly desire the success of his undertaking. With the exception of the Boston Journal, it is the only weekly medical periodical in this country. London alone has two or three. Paris has several which appear two or three times a week, while most of the other leading cities of Europe have at least one weekly.

We know of no one better calculated to head the enterprise than Dr. Butler. His journal has been among the ablest, most spirited and enterprising in the country. H.

GONE TO THE LOWEST BIDDER—"NATIONAL MEDICAL COLLEGE."—The following correspondence speaks for itself. As we suppress the name of the author, we will merely state that he is one of the most enterprising and successful practitioners within our knowledge. We know him well, and regard him as a *perfectly reliable man*. We forbear comment. H.

—————, Ohio, October 27, 1858.

Dear Doctor : My brother, who has been reading medicine with me for the last two years, and whom I fully expected to have had at Starling Medical College this winter, has been furnished a *free ticket* to the course of lectures in the National Medical College, and started for Washington City last week.

Of course this intelligence is of no interest to you. But I deem it proper that I inform you why he is not at your school, as I had written you that he would be there.

* * * * *

Truly yours.

Prof. HAMILTON.

————— .

Thoughts on the Progress of the Races.

MESSRS. EDITORS: We have in our country, young as it is, two distinct orders of Mind, the *Intellectual* and *Mechanical*. The Intellectual is seen in the broad and comprehensive views it takes of every thing with which it is surrounded. It is an invisible something that dwells among us, presiding over our movements and regulating all of our relations. In Physics, it indicates the proper method of research, the method followed by the best results; in Art, it shadows forth the types and forms most worthy of imitation and preservation; in Sociology, it adapts institutions to the nature of those who are to be affected by them.

It is not our intention to do any thing more in the present connection than to indicate, in a very summary way, something of the agency of this order of mind as it exhibits itself at the present time in our social system. Some one has said that there is not a single principle pertaining to the social state that is settled—that has been verified as being absolutely true. However much surprise this declaration may occasion to some, it is nevertheless not to be criticised. Every principle pertaining to our institutions has the broad seal of imperfection stamped upon it, and as a consequence is all the time undergoing change of form, such as we have in matter. Notwithstanding all this, where a race has existed for any length of time, institutions have grown up around it, *the leading elements of which are in conformity to its wants*. We might elaborate this by referring to certain races that have had a political existence as independent nations during the historic period. The Chinese have adopted those laws and customs that the genius of the race requires, and under which it reaches the greatest degree of social perfection of which it is capable. The Hindoos and ancient Egyptians did the same thing. The more modern nations, the English, Spanish, French, and Russian, all possess in their civilization certain things that are common, yet each one has in its peculiar educational institutions, etc., something founded upon the nature of its people.

Nor has any variety of the Caucasian race—the only one of whose history any thing is certainly known—been long in reaching the status of its civilization. Rome occupied but about 1,200 years in its rise and fall; Greece not half this length of time; while most of the nations, considered as of modern origin, so far as the perfection of their laws and usages are concerned, are regarded as having

already attained the essentials of what is suited to them. They have not, perhaps, arrived at the perfect development of their institutions, but there is every reason to believe that each one of them is suited in the form of government it has adopted. England wanted a Monarchy, France something more, Russia an Autocracy, and America a Republic.

We have premised these remarks for the purpose of trying to set forth something that is practical in regard to certain races that have but little if any history. I allude to the Brown races, the American Indian and the Negro.

Of the Yellow and Brown races it may be remarked we know but little that is trustworthy. Of late years Chinese institutions have been slightly investigated; and the Hindoos have had their connections with the social state somewhat looked into. The same is true with reference to the Malays,—still the historian has, as yet, no material with reference to any noticed worthy of record. Of the Syro-Arabian stock more is known. They have been demonstrating their peculiarities for some 2,000 years, under circumstances that can, to some extent, be appreciated. For a short period the nation seemed to rise to a point where it took hold of science and cultivated it with some success. Religious institutions, too, that have commended themselves since to a large portion of mankind, originated with this nation. The taste of the people, however, has in the general, been for a pastoral, nomadic life, and the Patriarchal form of government. After occupying the halls of science for a time, after having been instrumental in giving to the world the science of Chemistry, and much connected with Mechanics, after having served as the instruments through which a system of religious and moral ethics was successfully brought to the attention of mankind, the nation relapsed back to its barbarous state and remains so until the present day.

Our American Indians differ from the Arabian stock in no very striking manner. The Aztecs and Toltecs have left relics sufficient to indicate that they cultivated some of the coarser arts. Of their civilization, their religion and laws, we know nothing. The present stock of "Red Men" among us have advanced to nothing in the arts, and to nothing higher than the rudest forms of idolatry in religion. Without any form of government except the Patriarchal, they have remained for two hundred years contiguous to an enlightened nation, but not adopting any of its improvements.

The typical woolly-haired races, of which the African as he exists in his own country, is a good specimen, have not since the first that has been known of them, made any advance towards a civilization. They have never invented a reasoned theological system, nor discovered an alphabet, nor framed a gramatical language, or took the first step in science or art: they have scarcely comprehended what they have learned, or retained a civilization taught them by contact with more refined nations. Their form of government, when any at all obtains, is autocratic—the chief of a tribe having power over not only the rights but the lives of his subjects. War rises among Africans to the character of an institution. It has existed among kindred tribes since any thing has been known of the people, and is often carried on for the purpose of making slaves. Of the 110,000,000 in Africa, 80,000,000 are said to be in a state of slavery.

All that is known of humanity, justify, to a considerable extent, the idea that progress has certain limits in a race beyond which it cannot go. Let us for a moment look at this position. The Egyptians got no higher than their Pyramids. From their barbarous condition they passed through every form of political government, cultivated a number of sciences with success, and developed a high order of the Arts, before they culminated in the building of the Pyramids. Here seems to have been the point at which the civilization of this ancient people terminated.

The Greeks reached their climax in Poetry, Oratory, Music and Sculpture, before the Christian era. The intellect of the nation, after having attained to unexampled energy and cultivation, has become dwarfed, until it is now scarcely recognized as being of Caucasian origin.

The Romans were satisfied in letting others originate the means for the cultivation of science and the improvement of the arts. Their ambition consisted in making soldiers and heroes out of all the people, so as to increase the dominions of the empire. Figuring at the head of a "*Triumphal Procession*" was the acme of Roman ambition. When the ability ceased for keeping up these, national decay came next in order.

The Chinese, centuries since, elaborated a form of government and educational institutions, that remain about the same at the present day. The nation might well be said to be *in statu quo*. Chinese Arts, however, are in a state of decay. Articles exquisite in workmanship, are among the people, without the knowledge

as to how they were manufactured. India was once the seat of an advanced order of cultivation. The human mind may never have had the strength there as in other Caucasian countries. The nation, however, attained to great excellence in many things. But more than a century since the work of disintegration commenced, which rendered the country an easy prey to an intrusive nation.

From what we have said, Mr. Editor, I hope you will not conclude that we are opposed to the progress of the races of mankind. The points we wished to suggest are, that each of the races strongly characterized, has its own kind of social state or civilization, and that it cannot be the subject of any other. That this state is reached by the operation of instinct and reason combined, and that it has its limit, beyond which it seems it cannot go.

If these thoughts, rapidly, as you will discover, thrown together, are, in your estimation, worthy of a place in your Journal, you are at liberty to insert them.

Q.

COLUMBUS, October, 1858.

VEGETABLE ASTRINGENTS AS COLLYRIA.—The *Lancet* gives a report of some of the practice at the North London Ophthalmic Infirmary, under Mr. E. Hart, which favors the use of collyria made of the vegetable astringents. Mr. Hart advocates two general laws, by which he is guided in the choice of local applications. "1. That all kinds of collyria are objectionable which leave any sediments. 2. That vegetable solutions are to be preferred to mineral." The first excludes lead and zinc, which have frequently been objected to with justice, on account of their deposition of a permanent character on ulcerated surfaces. His preference for the vegetable collyria is founded upon a practical observation of the benefit derived in numbers of cases. He employs frequently, a collyrium of tannic acid with glycerin, a strong solution of which is very effective in the treatment of granular lids. In *asthenopia* and other forms of debilitated vision, he uses with advantage a solution of green tea.

But these remarks of Mr. Hart should not cause us to feel a prejudice against other mineral collyria, which have repeatedly been found of signal service, and which do not leave any sedimentary deposit.—*Med. Reporter*.

THE DIAGNOSIS OF PULMONARY CONSUMPTION AT ITS COMMENCEMENT.—Dr. Scott Alison read a paper recently on this subject before the Western Medical and Surgical Society. The importance of diagnosis at an early period was shown by reference to facts arranged under three heads—1st, the vast mortality in advanced stages; 2d, the great destruction of the lining structure almost invariably found when the disease has long existed, in a great proportion of cases excluding all reasonable hope of remedy; and 3d, the material benefit afforded in a very large proportion of cases easily diagnosticated and treated. The number of patients under the care of the author at the Hospital for Consumption at Brompton, who here formed the grounds for calculation, is nearly 2,000. The mortality in advanced cases has been very great, and very few have presented signs of permanent restoration to health; whilst the mortality in early cases has been comparatively trifling, even when long observed. About one-half of these latter cases have been greatly improved, and have presented satisfactory evidences of the disease being arrested. Numbers have returned to their employment, or applied themselves to less laborious and exposed occupations. Muscle and fat have greatly increased, cough has been removed, and the respiration has been deprived of much of its shortness. About three-fourths of these patients presented grave symptoms and the usual physical signs; while the remainder presented either well-marked physical signs without material symptoms, or very marked symptoms with physical signs rather beneath the average weight of evidence ordinarily deemed proof of phthisis. The author regards the results as due to the early period at which disease was diagnosticated, and not to any particular method of medical treatment. Early diagnosis would be secured by a complete inquiry into the history of each case, by regarding the entire series of symptoms, and by a complete physical examination instituted at once, the chest being freely exposed back and front. The present state of medical knowledge was such and so widely diffused, that it was not likely we should be able to find any new symptoms of the disease, one which had been carefully observed for ages; but it was not unlikely that we should increase our knowledge of the physical signs. In the particulars of sound, form, and motion, additions would probably be made; but it was with respect to sound that most advance would be effected. Simple observation by the present means of auscultation would probably suffice to do much, but it was not unlikely that improvements

in our instruments for auscultation would render assistance. Dr. Alison referred to certain sounds which he had frequently heard in phthisis at its commencement, and before dullness of percussion had manifested itself, or was materially pronounced. The sounds were an "arrowroot-powder" sound, very fine, and accompanying expiration; buzzing, humming, and kettle-boiling or kettle-singing sounds. He was as yet uncertain as to the mechanism of the kettle-singing sound, but was inclined to think the evidence pointed to slight pressure on the veins of the lung causing oscillations of the blood and vessels, such conditions as are produced in the neck by gentle pressure with a stethoscope or by tightened integument. This sound is continuous, and several of the patients who presented it had suffered from hæmoptysis. Crumpling sounds had been frequently heard. A great means of discovering phthisis was afforded in the differences in the character and amount of respiration; and he (Dr. Alison) believed that the instrument which he had made, which gave a stethoscope for each ear, and which he designated the Differential Stethoscope, would prove available in rendering very slight differences in respiration appreciable, which could scarcely be discovered by the ordinary stethoscope. The ordinary stethoscope necessitated removal of the instrument from one part to another, and a certain loss of time, though slight in itself, important when comparing two sensations nearly alike, was incurred. For the diagnosis of pulmonary consumption at its commencement, we should look for the signs of that disease at that period, and not for those of later periods. The acoustic properties of the lung with small points or spots of tubercle were, and must be, different from those of that lung which is so studded with tubercles, or so infiltrated with that material, that nearly all the lung tissue proper is pressed upon or obliterated, or when the lung is broken down and has little cohesion, and presents numerous cavities. (The Differential Stethoscope was exhibited to the Society.) In many examples of pulmonary consumption no dullness on percussion whatever is found; and not one of the recognized signs is present in all cases, or even at all times in the same case. We must be content with a certain amount of evidence, and that will not be the same in all cases, or in the same case at different times. Deviations from the natural configuration of the chest occurred in pulmonary consumption at an early period. These were made out by their history and by comparing one side with another. The author's Chest-Goniometer would serve in discovering the devi-

ations from the natural angles and curves, and in measuring them. The measurement at one period might be compared with the measurement at another. (The instrument was exhibited.)

Specimens of tuberculated lung, both in the early and later stages of the disease, were exhibited; and they served to prove that the physical signs in the different conditions of lung must greatly vary, and that the lung dotted with solitary tubercles the size of mustard-seeds, would afford few if any of the ordinary signs, and chiefly produce deviations in quality from the natural respiratory sounds, and some such delicate new sounds as had been referred to. The author was not prepared to say that these delicate sounds would not be found in other morbid states besides phthisis, but the same limitation held in respect of all other sounds.

The examination of the sputum, and the discovery by means of the microscope of tubercle and lung tissue, were referred to.—*Lancet*, June 19, 1858.

SCARLET FEVER.—The *Virginia Medical Journal* gives some interesting remarks by Trousseau, from which we gather the following concerning its treatment:

As it runs a fixed course, he thinks, when it exhibits no serious complication, the less we do, the better for the patient. The antiphlogistic is highly injurious. Mild laxatives are beneficial in moderating febrile action. When we have excessive heat of skin, vomiting or diarrhoea, delirium, coma, or convulsions, cold effusions are of great utility. "The patient being placed, naked, on the sacking, you pass a sponge, wetted in water of the proper temperature, very rapidly over the whole surface, and then, without drying the body return him to bed, and cover him up. An hour after, the skin is found less arid, its heat less mordant, while there is a diminution in the frequency of the pulse. The other nervous symptoms also abate." If they again appear, repeat the process, even several times a day and several days in succession. The eruption is found more vivid after the application. As internal remedies, use carbonate of ammonia, from 30 to 60 grains a day; musk, 3 to 6 grains.

In the great majority of cases of scarlatina maligna, he does nothing for the throat. The only one to which he attaches any importance is the careful application of hydrochloric acid. When angina, with diphtheritic complication, comes on, keep up the strength by quinine, food, and stimulants. Anasarca, when not ex-

tensive, he treats by "rest in bed, tepid drinks, and moderate diet." Bloody urine, by acid drinks, uva ursi, with spirits of turpentine, digitalis and gentle laxatives. Extensive anasarca, rapidly produced, and tendency to convulsions, by active purgatives, head erect and legs hanging down. Scarifications, or large blisters to the legs. For the convulsions, musk, with belladonna; and compression of the carotids he has found useful, especially compressing the carotid of the opposite side, when the convulsion is on one side only. When on both, compress alternately, or both, if respiration is not too much obstructed by it. It should be continued for fifteen or twenty minutes on each artery. When the acute symptoms have passed away, give gentle diuretics, as nitrate of potassa and digitalis—[is the latter a diuretic? Eds. M. & S. REP.]—and iodide of potassium in large doses. The pleural and pericardial complications are to be treated by blistering and *puncture of pleura or pericardium*, and, if necessary, *iodine injections*.—*Med. Reporter*.

COLD WATER IN THE TREATMENT OF CHOLERA.—Dr. T. B. Pinckard contributes two papers in the May and July Nos. of the *N. O. Med. and Surg. Journal*, in which he asserts his claim to the 100,000 francs left by M. Bréant, of France, to be awarded to the person who discovered the cause of *cholera and its cure*. He divides this disease in regard to its treatment into three stages: premonitory or diarrhœal, true cholera, and collapse or death stage. He gives in the first and second stages, this prescription: R.—Hydrag. chlorid. mite ʒss; pulv. camphoræ, capsici. āā gr. xx; pulv. opii, pulv. zingib., quinine, āā gr. x.—M. Ft. in chart. No. x. One given "in a syrup of loaf sugar and brandy, washed down with brandy and water, etc." Sinapisms to the stomach, if nausea. In this stage give very little drink, as brandy and water, ginger-tea, etc. If the stomach is loaded, an emetic of salt, mustard and warm water, and then continue the powders after each dejection. To children $\frac{1}{8}$ to $\frac{1}{4}$ of a powder. Especially in the second stage, does he regard the salt emetic as invaluable. In the third, or stage of collapse, he gives cold water *ad libitum*, and its curative effects seem wonderful. He considers that it acts by supplying the place of the serum that has been lost from the vessels; the exhalents being dry, absorb the water rapidly, and restore the circulation, which is being performed very imperfectly, on account of the blood not being in a sufficiently

fluid state. Its immediate effect was to produce free, warm perspiration, and bilious discharges from the bowels, and restore completely the circulation. Many cases are mentioned by Dr. P., where collapse had come on, but speedily recovered by the use of cold water.

He gives, at some length, his opinion as to the cause and prevention of cholera. He considers the *electric fluid* as the life of man, and when the earth is deprived of its proper quantity, epidemics prevail. His article is valuable so far as it relates to his experience in cholera and its treatment, but the theoretical portion of it must be classed with much that has preceded it, of the same kind, by various authors.—*Med. Reporter*.

TOBACCO IN ERYSIPELAS.—Dr. John G. Stephenson, of Terre Haute, Indiana, desires to call the attention of the profession (*Western Lancet*, May, 1857), to the treatment of erysipelas which has proved so beneficial in his practice, that the use of it has become, with him, a matter of routine. "The treatment is simply the covering of the inflamed surface with wet tobacco leaves (such as are to be had in any cigar shop), which are permitted to remain until much nausea is produced." Dr. Stephenson, while he admits that the excessive and distressing nausea produced by the internal use of tobacco prevents its administration by the stomach, is willing to believe in its power and safety when cautiously applied to a cutaneous surface, as a remedy for local inflammation.

We must, however, be aware of the difficulty, not to say impossibility, of determining, after no matter how many trials, the extent of surface to be covered, and of absorption produced by this application of tobacco, so as to procure the desired amount of sedative effect and accompanying nausea. The difference between the internal and external use of tobacco is only one of degree; and in both instances there is uncertainty and risk of alarming, if not fatal, results. Hence the great caution always practiced in the administration of this plant as a therapeutic agent—a caution which is especially called for in cases of erysipelas in old subjects with broken-down constitutions and slight powers of reaction.

In one of the cases related by Dr. Stephenson, the patient was pregnant about five months. She soon got well under treatment.

This consisted in the use of calomel, followed by saline purgatives, Dover's powder, sulphate of cinchona, and the local use of tobacco. In another case of a person aged 17 years, slightly chlorotic, in which tincture of the chloride of iron internally and tincture of iodine externally failed to prevent the extension of the inflammation of the leg from above the ankle to above the knee, the application of the wet tobacco leaves soon produced extreme nausea and prostration, followed, after several other renewals of the same topical treatment, by a complete removal of the inflammation.

STRAMONIUM IN CONVULSIONS.—Dr. R. H. Salter, of Boston, relates his experience in the use of stramonium both in puerperal and common convulsions. (*Boston Med. and Surg. Journal*, March, 1857.) In reference to the first of these, he passes in review some of the modes of treatment which are had recourse to. We omit this enumeration and his criticisms on the occasion, which will be noticed more appropriately in the Report on Obstetric Medicine, in a future number of this Journal.

Of the six cases of puerperal convulsions detailed by Dr. S., five were of females in their first labor; the subject of one was attacked in her fifth labor. In the first case, the convulsions occurred on the eleventh day after delivery, and they left behind them permanent partial paralysis of the right side of the body. Age, 26 years. Half an ounce of the tincture of stramonium was given at a single dose. Dilatation of the pupils ensued in forty minutes, and the convulsions ceased. In the second patient, age 20 years, the convulsions came on just as the head was passing the superior strait. She took half an ounce of tincture of stramonium, with tincture of ergot—quantity of the latter not stated. Convulsions returned but once afterwards, and a healthy living child was born. In the third case the labor was slow, and the convulsions assumed a tetanic character. Relief procured in the same way as in the preceding case. The fourth patient had slight uterine hemorrhage for a week before the coming on of labor. A very large blood-letting failed to abate the violence of the convulsions, which were arrested completely by the tincture of stramonium, in a dose of ten drachms, given as an enema; the patient being unable to swallow. She was

delivered of a small dead child. In the fifth case, that of the fifth labor, convulsions occurred eight or nine hours after labor had set in. The convulsions ceased, and the patient became tranquil in half an hour after the administration of the tincture of stramonium. The sixth case was that of an unmarried female, aged 19 years. The fits came on at the time the head was passing the superior strait; they ceased after the administration of half an ounce of the tincture of stramonium, with ergot—quantity of the latter not stated. Five hours after the birth of the child, pain and convulsions supervened, which were arrested by a dose of five drachms of the tincture of stramonium.

Dr. Salter, in concluding his history of these cases, which we have abbreviated, remarks, “that the common and hysterical forms of puerperal convulsions will tolerate, and, for the most part, do well, under almost any rational and judicious treatment. Still, in these forms, I consider the treatment with stramonium as far preferable. It is in the epileptic form, the most frightful and formidable of all puerperal convulsions, that the common treatment is most likely to fail; and if, perchance, it should not fail, it is replete with peril, not only immediate, to life, but also to the future health of the individual. It is in this form that the comparative value and power of stramonium to control spasmodic action is most strongly exhibited.”

Dr. Salter, although an enemy to large bleeding, practiced on these occasions, admits that there are cases in which the inflammatory excitement is great and manifest, in which a moderate bleeding should be premised as a *preparatory* measure. Ergot and lupuline will also be found necessary adjuvants, and other articles which might be mentioned; but in no case is any one of them a remedy *per se* for convulsions.

Dr. Salter describes two cases, one a male, aged 17 years, the other a single female, aged 24 years, who had suffered from convulsions, and to both of whom he gave tincture of stramonium with success. In the first case, he directed the tincture to be taken in one-drachm doses every fifteen minutes, until four or five doses were taken. On a repetition of this course, the medicine was directed to be continued at intervals of four hours after the fourth dose, as above. The female had had convulsions. The boy had no more fits after the second day from beginning with the stramonium. The

female had had convulsions, simulating tetanus, for thirty-six hours. Dr. Salter ordered the use of the tincture of stramonium in half-ounce doses. If the first did not relieve the patient within half or three-quarters of an hour, the same quantity to be repeated. "In less than half an hour after the medicine was given the convulsive action ceased, and the woman became perfectly quiet, fell asleep, and did not awake until next morning, when she rose, feeling perfectly well, experiencing no inconvenience whatever from the disease or the medicine."

Dr. Salter makes an apposite, and, at the same time, a practical remark, in conclusion. It is that, in his belief, many of the cases reported as tetanus are only counterfeits of this disease.—*North Am. Medico-Chir. Review.*

GALVANISM FOR COUNTERACTING PAIN IN THE EXTRACTION OF TEETH—I wish to lay before this society some practical results of my experience in the use of galvanism, particularly for allaying pain in the extraction of teeth. During the past few weeks, several of the dentists of this city have brought persons to my office for me to apply electricity from some of my batteries, while they extracted the teeth, and in some instances have also requested me to attend, at a given hour, at their respective offices for the same purpose. The whole number of patients that I have applied it to for this purpose is about twenty-six; the number of teeth operated upon, sixty-four. The first was a most interesting case—Mrs. W., the wife of one of our distinguished lawyers, a noble-appearing, but nervous lady, attended by her mother, and brought to my office by Dr. Dillingham. This lady had fourteen teeth more or less decayed, and much denuded of their gum by the long ravages of tartar or morbid secretions in the buccal cavity; each tooth exquisitely sensitive, even to the touch of an instrument, and all of which she greatly desired to have removed at once, for given reasons. The first tooth attempted was extracted with gentleness and care, and the electrical current was very feeble. The electricity was felt, and she evidently suffered pain, although she expressed a sensible relief, judging from her past experience in having her teeth extracted. I increased the current very considerably, and the next tooth came out with astonishing success; no sort of pain was experienced.

She rather supposed the instrument had slipped off, and the tooth was yet in the jaw. This must have been the first successful operation in Boston. The remaining twelve were extracted with the same favorable result, invariably. The fangs of these teeth had that bloody appearance which indicates long inflammation of their periosteum and old ulcerations. I observed that as each tooth was about to be taken hold of, she was very particular to ascertain if the current of the battery was in actual contact and readiness. No prostration, nor even fatigue, followed the extraction of all these teeth, for they came out entire. So delighted was she with this process, that she offered to pay twice the fee asked, and her husband called a few days after to express his thanks for the great relief afforded to his wife. When catechised closely, to ascertain from her the precise sensation or suffering of the operation, she said she "*felt no sort of pain*, but quite a disagreeable sensation at the instant of grasping the tooth, yet no worse than it would have been to touch each tooth with the instrument in the ordinary way." She had taken ether on former occasions, but preferred this very decidedly. One young man, belonging to the Navy, said he was very sensitive and nervous, and wanted a tooth extracted without either pain or going to sleep. But he said, "*it did hurt him very badly*;" he also vividly described feeling the tremulous sensation of the galvanic current. He never had had a permanent tooth extracted before.

Another unsuccessful case was a very intelligent young gentleman, of noble frame and fine form, but of delicate health, apparently of German extraction. He wished to have two teeth extracted in this way, because his teeth were so firmly set that they usually broke in extracting, and he was professionally advised not to inhale ether. His first tooth was taken hold of, and the current applied, but it fractured after a very severe and protracted tug at it by the dentist, leaving the roots solid in the jaw. He appeared to suffer, as he said he did, most intensely. The electricity gave no kind of relief, except from "the moment of the disagreeable application of the instrument" until the moment of fracture, which, however, was some seconds of time, and there was no pain, as he said, but at that instant of course the current was cut off, and the pain was awake again in all its fury, as it is wont to be on the occasion of such accidents. He went away much distressed.

Another very interesting case was a young lady who had come

with her father some forty miles to get her teeth extracted by this process, as they had heard it was practiced in Boston. The first tooth, an upper molar, was taken out with perfect success; but after washing the mouth with water, and no little talk, the next was operated upon, as we supposed all right, when to our surprise she screamed and almost fainted, from the pain of this second molar tooth. At once it was discovered by her father that there had been no contact of the galvanic current. The pad had fallen, unobserved by us, from the back of her neck outside of her dress into the operating chair, before the operation commenced. As soon as she was sufficiently recovered, she submitted again to the trial, and three more teeth were taken out without any sort of pain or disagreeable electrical sensation. She said it seemed "more like taking wooden pegs out of her jaws than like pulling teeth." This appeared to all present a fair test case. She said she should never forget the different sensations between having teeth extracted with and without the galvanism.

Two other cases were not very successful, from causes I need not here mention. But in the great majority of all these cases, there was expressed a great relief from anything like pain and a general satisfaction with the result. I should judge that about one-third of all who have been operated upon in this way persist in saying that "*there was no sort of pain whatever,*" while others, perhaps as many more, affirm that there was no actual pain, but they felt a sensation, by no means agreeable, at the instant of applying the forceps. Others experienced also "a moderate degree of pain," but they say "by no means very bad, and quite bearable." More than twenty of these persons, when asked for a candid expression of their experience, said that this gave very decided relief in extracting teeth, and that they preferred to trust it again if ever needed. All of these persons had had teeth extracted before, and some of them had inhaled chloroform or ether on former occasions.

The box of teeth I place here on the table for examination, contains some 30 or 40 of those *actually extracted without pain by the aid of galvanism*. It is evident that such teeth ordinarily give great pain in extracting. The rationale I am not prepared to give. No known current or shock of electricity, or galvanism, however modified or applied, has been known to be instantaneously paralyzing, or benumbing to pain under ordinary circumstances, without being also disorganizing more or less, and hence dangerous. We make

use of no such current or shock. But a to-and-fro current from a Smee's Battery, with the strongest pole attached to the forceps; and contact made exactly at the instant that the instrument fastens upon the tooth, does succeed in taking away three-fourths of the awful pain experienced in having teeth extracted. To have uniformity of success, the electrical current must be gentle, and adjusted, as to intensity, for each case according to the experience of the operator; and this current must be insulated from the hand that holds the instrument, as well as from the lips and gums of the patient, so as to spend its exact quantity of force on the tooth only. It is certainly a nice operation to succeed, but I believe, when carefully and accurately performed, it will more generally succeed than in these cases I now report. If any one item in the process is not observed, the whole is a failure.—*Boston Med. and Surg. Journal.*

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Those who take opium and its ordinary preparations, cannot be ignorant of the fact, that its distressing and pernicious effects result from the operation of its deleterious principles, and that the tremors, languor, and lassitude with which its devotees are afflicted, and for which they repeat the dose to relieve, are sensations of its own creation. In such cases, this preparation will afford a gratifying substitute.

But in consequence of the exclusion of these deleterious principles from the Elixir of Opium, it is not liable to derange the functions of the system, nor injure the constitution and general health—hence its high superiority in all cases in which the long-continued and liberal use of opiates is indicated and necessary to allay pain and spasmodic action, and induce sleep and composure, as in cases of fractures, burns or scalds, cancerous ulcers, and other painful affections.

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PART FIRST.

ORIGINAL COMMUNICATIONS.

Epidemic Diphtheritis, and its Treatment. Read before the Hebron Medical Society. By THADDEUS ASBURY REAMY, M.D., Hopewell, Ohio.

In attempting a brief discussion of the subject announced, and presenting a meagre history of the disease as it has prevailed in this vicinity during the last year, and still prevails to a limited extent, I feel no small degree of diffidence, growing out of the fact that I am compelled from careful observations made during the treatment of more than one hundred cases, to differ slightly as to the nature, and very *materially* as to the proper constitutional treatment of diphtheritis from the very eminent opinions of Prof. Wood, Meigs and other standard authors.

I presume there are but few attentive students of progressive medicine, but have been delighted and had their stock of professional knowledge very much improved by having the benefits of the experience and opinions of their medical brethren on both sides the Atlantic through the efficient facilities of the many ably conducted journals to which all may have access.

It must also have been noticed, however, that during the last few years an *unhealthy* ambition to be the author of something new has very considerably modified the productions even of good men.

Having my attention at present particularly directed to this existing evil, I shall, as far as possible, avoid it in this paper. Of course I

cannot expect complete immunity from that which perhaps, despite their vigilance, influences older and wiser heads.

In the month of February last, (1858,) I was called upon to visit, in consultation with Dr. McCray, of Gratiot, Ohio, a little girl of four years, daughter of Mr. S——, residing in the above named village. Dr. McC—— informed me that he had been treating the case 8 or 10 days. Had from the first been soreness of the throat, attended with slight febrile symptoms. During the last 24 hours there had been hoarseness, with great difficulty of breathing. Several deaths had occurred in the village in the past three months, and that he regarded the disease as a *marked* form of Scarlatina. Had in the case before us, used mercurial cathartics astringent gargles, and anodyne liniment externally.

Condition of patient at the time: pulse 140, feeble; surface of trunk ordinary; extremities cool; breathing very difficult, croupy cough; complete aphonia; examination of fauces revealed a deposition of pellicular membrane completely covering tonsils, uvula palatine arches, and extending as far down into pharynx and larynx as I could possibly see by depressing the tongue with the handle of a heavy spoon. Parotid and sub-maxillary glands much enlarged. I unhesitatingly pronounced it a case of diphtheritis, and gave an unfavorable prognosis. Prescription.—Nit. Arg. in sol., 40 grs. to oz., to be applied freely as far down the larynx as possible, by means of probang and sponge. After which an emetic of Ipecac and Ant. Tart. After free emesis was produced, another application of sol. Nit. Arg.—this latter to be repeated 3 times daily. Internally Hyd. Sub. Mur. grijrg every 2 hours. Liniment composed of olive oil, camph. gum and aqua ammonia externally; simpisms to extremities.

Second day.—No better; treatment continued. Third day—worse, almost suffocated; patechia about shoulders and neck; dark yellow echymosed spots on lower extremities.

Ordered another emetic; patient threw up a false membrane over an inch in length, being a perfect tube moulded by the trachea, having considerable firmness, (remains perfect at this writing, and was exhibited to the society.) After this, breathing somewhat easier; ordered stimulants. Fourth day died.

Saw, within next 5 weeks, two other cases in consultation with Dr. McC——, and 3 cases of my own. Similar treatment was instituted, and similar results followed. They all died in from 5 to 10 days after attack. In two of these cases treatment was commenced

when the false membrane was limited to the tonsils and about half the space between the palatine arches. In them the emetic was omitted.

An obvious and rapid tendency of the membrane to pass into the larynx led me dilligently to employ the mercurial, under the impression that more than all other remedies combined, this had the power of detaching and preventing deposition of the membrane. In this belief I was sanguine, partly from the statements of Wood, Meigs and others. But unfortunately results did not serve to strengthen my faith—nearly every patient died of asphyxia, produced evidently from extension of the false membrane into the trachea and bronchial tubes.

Within 10 days after death of last named cases, I was called to see a little boy of 3 years, son of Mrs. F., of Gratiot, and brother to last patient lost. Pulse 140, feeble; tongue slightly fured; papilla elevated; fauces and tonsils covered with a whitish yellow looking membrane. Removed a portion of the false membrane with some difficulty, by means of a groove director, mucous membrane beneath entire, but very red and glossy. There were also several dark greenish echymosed spots on the lower extremities below the knee. Urine turned litimus paper, after being reduced by acid, deep blue. Applied in axilla afforded same result—in stools which were fluid the same condition, an alkaline condition of all the secretions.

Prescription.—Argt. Nit. in solid stick, fastened in the end of a goose quill by means of a thread (which is much safer than the port caustic,) applied effectually as far down as the membrane could be reached; followed by an emetic of Ipecac and Art. Tart; Alum dr.

8 oz., water to be used 4 to 6 times daily by cotton swab. Internally Quinine Sulph., gr. iij; Acid Nitric Dilute, 9gtt. 12; Aqua Fout, 3ss. every 4 hours. After 6 or 7 doses had been given the acid to be administered but 3 times daily, and quinine to be repeated every 3 hours.

Second day.—Pulse 135; not quite so feeble; no other improvement; treatment continued. Third day—no change; treatment continued. Fourth day—membrane disappeared, except two or three small patches at upper part of phar anx, and some little on each tonsil; no other improvement; treatment continued. Fifth day—much better; alum-water continued, but Argt. Nit. discontinued.

Sixth day—dismissed. The Argt. Nit. was in this case applied by myself each morning.

Within 4 weeks from this time I treated some 24 cases in same neighborhood, in same way. Chlorate potash was used as a wash, or gargle, (owing to age,) when the secretions from fauces or nose were very offensive. Every case recovered. Treatment was commenced in every case before the membrane had entered the trachea. Although in several cases it was very rapidly tending in that direction.

In the month of June last the disease appeared again in the family of Mr. B——, who resided one mile west of my village (Mt. Sterling,) and $2\frac{1}{2}$ miles east of Gratiot. First was a daughter of 15 summers, an exceedingly intelligent and interesting young lady; and so insidious was its march, that when I was first called the pellicular membrane had reached the trachea and bronchia. The tonsils were gangrenous; offensive sanies from nose, patechia about neck, and on extremities. Pulse 144, very feeble. Prescribed Nit. Silver as before. Most powerful stimulants failed to rally the failing energies of life. Epistaxis occurred on the 3d day, and when the nostrils were plugged she bled at the gums and lips. She died of exhaustion.

Notwithstanding I cautioned the parents to carefully watch the remaining five children, and report to me the earliest indications of the approach of the disease, yet they allowed a little boy of five years to get in the very last stages of the disease before they detected it. When I first saw him he had all the symptoms of membranous croup. After treatment was commenced, he improved apparently, but in a few days died when we were not expecting it. I tried the mercurial treatment in his case. The four other children all suffered from the disease, and in this family the adynamic condition and malignant tendency of the disease was greater than in any others I have seen, owing, perhaps, to what I think is plainly evident among all these children—the scrofulous diathesis. One of them, a little boy, was under treatment four weeks. Treatment same as before given—Argt. Nit., alum water, quinine and Nit. acid. All recovered.

The disease spread rapidly. In five weeks nearly one hundred children in a territory of two miles square were victims. Many of them were very bad. All, however, were put under treatment before the membrane had encroached upon the trachea, as I had by

this time succeeded in arousing the parents to the importance of watching the throats of their children daily. My partner, Dr. C. H. Evans, and myself, treated all the cases that occurred in the above named locality. The above specified treatment was instituted in every case, sulphate of magnesia being used invariably as a cathartic, and occasionally, where there was evident hepatic derangement, and the disease had not advanced too far, we prescribed a mercurial. Every case, except those I have specified, recovered.

From this epidemic I was enabled to make the following statistics: Whole number of cases treated, 120; deaths, (excluding consultation cases), 5; average age, 5 years; boys, 72; girls, 48; average duration of disease after treatment was commenced, 8 days.

Tests were instituted in many of the above cases, and, with but two exceptions, the secretions were all decidedly alkaline. There is in this disease evidently great depravity of the blood, and I am well satisfied that the disease, or the poison that feeds it, rapidly increases that depravity; for in those cases where there seemed to be some force and fullness of the pulse, some strength of system early in the disease, but a few days were sufficient to bring on adynamic symptoms, unless controlled by treatment.

I regard tonics and acids internally, and nitrate of silver locally, as the only remedies from which we may expect real benefit. These, if timely employed, will most always prove successful. Sulphate of quinine exerts almost a specific influence over the disease, and should be resorted to at once, irrespective of existing fever. There is depression of the nervous system from the very commencement, and no doubt the apparent force of pulse and tone of system often present at the beginning, is due to an attempt on the part of the organism to resist or throw off the poison. And thus tonics, instead of increasing fever, as under other circumstances, will reduce it, whereas depletion, or remedies intended to reduce inflammatory action by acting on the fibrin of the blood, increase the very symptoms they are intended to allay, and assist the disease in destroying the patient. I am thoroughly convinced that calomel in *any* form, at any stage of the disease, is very prejudicial. In the few cases where I have administered this drug to arouse the liver to action, it seemed to aggravate the local disease; and in the first cases named in this paper, I am satisfied its use hurried the fatal issue, although I have no doubt they would have died without its use. As intimated at the outset, I am fully aware that this view is in pos-

itive violation of the doctrines of eminent authority, yet I am led to the conclusions named. I have knowledge of several other physicians who have prescribed calomel largely in this disease, and they have been uniformly unsuccessful.

I do not believe that the blood is overcharged with an excess of fibrin or coagulable lymph, and needs unloading by the action of mercury. But I believe the blood is disorganized, and, in many instances, excessively alkaline, and that the *pellicular membrane*, in the fauces as well as in other parts of the body, perhaps, is the result of that disorganization; hence the use of acids and tonics.

The disease is evidently contagious. I need say but little as to diagnosis. Every physician is perfectly acquainted with this subject. The most reliable symptoms are, the insidious approach, very little soreness until the membrane begins to form, and the possibility of removing the *membrane* without injuring the mucous membrane.

In many of the diseases we are called upon to treat, we very prudently pursue a tentative course, but in this we must join the enemy in active and vigorous conflict, take advantage of every possible opportunity at the very outset, and push the battle until we have driven him from the citadel of life. Happily we have the means competent to the task, providing we commence in time. I do not believe that one case out of forty need be lost, if we are permitted to commence treatment before the membrane has gone beyond our reach. On the other hand, I think scarcely any case will be cured by any treatment whatever, after the false membrane has been deposited in the trachea.

The locality where this epidemic prevailed, is dry and healthily situated—mainly limestone water. There are still a few sporadic cases, but not so hard to control as when in an epidemic form.

Excerpta. By JNO. DAWSON, M.D., one of the Editors.
A browning or bronzing of the skin, a diagnostic mark of disease of the supra-renal capsules.

Some time ago Dr. Thos. Addison, of London, in an illustrated quarto of forty-three pages, gave eleven cases of disease of the supra-renal capsules attended, or rather marked, with *bronzed-skin*. Hutchinson has collected others from various authorities which purport to illustrate the same thing. As far as anything is yet known,

the diagnostic mark is present whatever be the form of disease of the capsules.

The supra-renal capsules are, as is known, small yellowish bodies, situated upon the top of the kidneys. They differ in shape on the two sides. The *right* one is three-cornered; the left semi lunar. The right is connected to the under surface of the liver, the left touches the pancreas. They are nearly opposite the tenth dorsal vertebra and very close to the semi-lunar ganglion. At the second month of embryonic existence the capsules are larger and heavier than the kidneys—hence they are supposed to contribute in some way or other to the support of foetal life. The supra-renal capsules are very copiously supplied with blood, some twenty or more small arterics entering them. Once in a while accessory capsules are observed varying in size from that of a millet seed to that of a pea.

The supra-renal capsules are the seat of hæmorrhage, tubercular and cancerous degeneration, encysted disease, and ossification.

Accompanying the coloration of the skin we have debility and more or less emaciation. The prognosis of bronzed skin is unfavorable, most of the cases dying rapidly.

The discoloration commences upon the parts most exposed to the sun. The neck, backs of the hands, and front portions of the extremities. The diseases, with which the affection under consideration is most liable to be confounded, are jaundice, the brownish earthy hue of malarial cachexy, the alterations of the surface following sometimes the internal use of nitrate of silver and chloasma. From the jaundiced hue, the bronzed skin may be distinguished by the circumstance that the latter never extends to the conjunctiva; from chloasma (*macula gravidarum*) by the circumstance that this state of the skin is usually connected with uterine irritation or pregnancy.

Much observation, it may be remarked, is still necessary to show that disease of the supra-renal capsules is always attended with bronzed skin. At present, however, when such a sign is present, the tendency is to suspect that such is the case.

Prognosis—Treatment.—According to all observation but little hope can be entertained of a recovery when the skin is decidedly bronzed. Nothing at all is known in regard to treatment.

Since our attention has been called to this subject, memory calls up a few cases of what was termed by the people "*black jaundice*," which have come under our observation at various times. Such cases were regarded as incurable, and what we saw confirmed the

popular notion. One case, that we have a very distinct recollection of, seemed several times, while under the use of mercurials and tonics to be improving, not in regard to the discoloration of the skin, but in strength and flesh. On a certain occasion, however, while working in the harvest field, the patient suddenly expired. No post mortum was made.

Modus operandi of Medicines.

This has been a prolific theme in all ages of the world. To ascertain the exact nature of the *action* of medicines, has always been a desideratum. All attempts, however, in this line, have amounted to nothing. The inquiry commenced too early; it began before the materials necessary to its solution were accumulated. Men gifted with a little ingenuity, in former times, seized upon a fact, or a few facts, and with these attempted a full explanation. What has become of the *Solidists*? the *Humoralists*? They had their day; they doubtless enjoyed their speculations; but where are they? Who has a record of their contributions? They died without issue. They were impatient. They essayed to cut the Gordian knot too soon. The extent of the inquiry was not comprehended. The theorists had but little respect for the composition of the organism, and the forces which obtain in a living human body—and yet without a consideration of these, who can expect to approach the truth? Again, before the action of a medicine can be understood we must know what we have to cure.

Stœchiology comprises a description of the composition of the human body—the simple chemical elements, and the immediate principles, or organic elements which make up the tissues and fluids.

Chemists have now made out sixty-five simple bodies, and fifteen of these are found to be normal constituents of the human body—oxygen, hydrogen, nitrogen, sulphur, carbon, phosphorus, calcium, magnesium, sodium, potassium, chlorine, fluorine, silicium, iron, magnesium.

These substances are found in very variable proportions in the tissues—oxygen, hydrogen, nitrogen and carbon, are found in all the tissues, and most of the fluids except fat. The first three are found in all the tissues. It is not necessary for our purpose to allude to the tissues where the rest of these chemical principles are found.

We will now look a little into the *immediate* principles, or the *organic* of some writers, of which the body is composed. Although

called principles, these are *compound*—and may be regarded as the “last bodies constituting the organism to which the tissues can be reduced by mere anatomical analysis, and which admit of no other subdivision without *chemical decomposition*.” (Robin and Verdiel.)

Research up to this time has established the presence in the human body of 84 of these immediate principles—all of them compound, except oxygen, hydrogen, and nitrogen.

Twenty-four (24) of these principles are of *mineral* origin; forty-two (42) are formed within the body by *disassimilation*; and eighteen (18) are called *organic substances*.

These elements, *chemical* principles, and *immediate* principles unite variously to form *histological* elements, the *tissues*, and the latter unite to form *organs*.

It is no easy matter to classify or enumerate the tissues. Where there is but a single histological element, as for example a cell or fibre, we say the tissue is *simple*; if two or more elements are present as cells and fibres, or cells, and fibres, and a homogeneous element, we say the tissue is *compound*.

These principles, chemical and organic, and the tissues which they form, are, when in the normal state, necessarily under the influence of several forces—chemical, dynamical, and vital.

How now does a medicine act on a body thus constituted of fifteen chemical elements, of eighty-four organic elements, arranged together in the form of tissues and organs, and normally under the influence of chemical, dynamical, and vital forces? This question of course applies to the action of a medical agent on a healthy body. An individual takes a dose of calomel into his stomach, and what are its effects? What change is produced among the chemical elements as to quantity, quality, relative state, etc.? What among the organic! What on the tissues? Does it disturb the forces chemical, dynamical, and vital, and how? These are but a few of the questions patent to the inquiry, and without they are answered, our views of the *modus operandi* of the drug administered must remain very crude. Has any one answered them? It is only necessary to look through our literature to see, not how they have been ignored, but to see the weakness of those who have made the attempt to answer them. The Methodic sect attempted the explanation on *mechanical* principles,—Locke (*Essay on the Understanding*) gives it as his opinion that the shapes of the minute particles of medicines were sufficient to account

for their several operations.—Boerhaave, Pitcairn, Perry, Mead, Fourcroy, Van Sweiten, Huggens, Bellini, favored this theory.

The attempts to explain the action of medicines on *chemical* principles had its origin most likely with Galen. He considered all medicines to be *hot, cold, moist, or dry*. The Alchemists of the middle ages gave an impulse to Galen's suggestions. They imagined that by their Philosopher's stone they could purify the *base metal* of the body. Valentine, Paracelsus, and Van Helmont supported this chemical hypothesis; and in Salman's Pharmacopeia of 1792, it is laid down as axiomatic—notwithstanding this period was illuminated by Newton and Boyle. These efforts to explain the action of medicines on chemical principles failed, perhaps mostly from the circumstance that nothing, comparatively speaking, was at the time known of chemistry.

The progress of chemistry at the present day, particularly of organic chemistry has, among other results, had the effect of reviving the chemical theory of the action of medicines. Shultz, Muller, and Leibig, are all advocates of the chemical theory. The superior knowledge possessed by these writers of physiology and of chemistry, has enabled them to bring forward a number of very striking arguments. Acids and alkalies figure prominently in their explanations, as they did formerly with the Alchemists. Both are said to act upon the blood; the former destroy the corpuscles, the latter prevent coagulation of the fibres of the plasma. The similarity of the composition of quina and morphia, it is supposed, explain their operation on the brain. And the chemical affinity of alcohol for the brain substance is supposed to explain its exhilarating or inebriating effects. Williams, in his Principles of Medicine, and Barlow, in his Practice, also favor the chemical hypothesis. The former regards it as proper that something definite be known of the normal, chemical, and histological composition of the part affected; that the forces by which it is actuated be understood, and as sequences that the changes from the healthy state be correctly appreciated. With such knowledge we are prepared to estimate the action of external and internal agents upon the system in health and disease.

Grounded mostly on the chemical hypothesis, a practice has recently grown up which makes the pathology of the case consist in changes in the *quantity, quality, etc.*, of the elementary constituents. If the patient is daily losing fat and flesh, the practice is to feed him upon these articles, or administer alcohol to arrest the destructive

assimilation. If the waste is in the osseous tissue, or in the nervous, the patient should take phosphates; if too much fibrine in the blood, alkalies should be given; if too many red corpuscles, (Plethora) acids—if the albumen of the liquor sanguinis becomes deficient by a continual drain by the kidneys, articles containing albumen in abundance should be used as food.

Not satisfied with any of the modes to which we have alluded for explaining the action of medicines, other writers have contended for the elucidation by other methods. By *degrees of stimulation*, (Brown); by *counter stimulation*, (Rasori); by *opposition*, (Hippocrates); by *similar agencies*, (Hahnemann); by *eliminatives*, (Sydenham); by *alterative* actions, (Broussais); (*Headland on Action of Medicines.*)

It would be a very poor compliment to the systems just enumerated to say that all of them are purely speculative, and yet who can pay them a better one? Each one of them has some facts in its favor, and to this circumstance has its currency been due. No one of them, however, nor all of them put together, is adequate to the emergency before us. Brown's system will explain the nutritive and exhilarating effects of alcohol; Hippocrates', ("*contraries cure contraries*,") the action of a purgative in constipation; Rasori's, the action of tartar emetic in inflammation of pulmonary tissues, and the action of stimulants when the vital energies are depressed; Sydenham's the action of Dover's powder on the skin, or nitrate of potash on the kidneys. Broussais, who supposed medicines acted by an *alterative* or *revulsive* effect, is too latitudinarian. The terms, *alterative* and *revulsive*, are susceptible of a variety of explanations. The notion of Hahnemann, that "like cures like," which, it will be observed, is the very opposite of that of Hippocrates, has not a single fact, that we are acquainted with, in its favor.

A pretty large proportion of the profession, and a proportion that embraces much capacity and learning, are in the habit of shying off from all these theories. They look upon them as wanting in a very essential particular—*verification under all circumstances*. Besides, none of them seem to give full credit to the presence in the organism of the vital power, and the influence which this exerts over agents applied to the body externally or internally. This principle makes the difference between a dead body and a living one; and being of this kind of consequence, its omission in any calculation relating to the movements of the body is, to say the least of it, ab-

surd. If it can preside over origin, development, and growth, it is certainly not negative in its influences with reference to the presence within its dominions of any extraneous matters. There is a certain class who believe that it even does its own doctoring—that when a screw gets loose, or a wedge drops out, the derangement is adjusted by the *vis medicatrix naturæ*. Another class believe that all the efforts of the physician should be confined to that of assisting the *vis medicatrix naturæ*. Now, neither of these doctrines of the vitalists are worth anything in the emergencies of practice. The Creator has stamped them both as false by the simple circumstance that He has *created medicines that will cure disease*, and this, of course, He would not have done if it had been unnecessary—if the vital force were always competent to the task.

As a consequence of the partial and imperfect character of all these systems to explain the *modus operandi* of medicines, we come to the conclusion with which we started out—that nothing scarcely is known of the subject. More research is necessary for the solution of the problem. If it is ever solved, it will no doubt be found that several of the systems passed in review will contribute something, but that those systems founded on physiology, as made known by vivi-sections, by chemistry, and the microscope, will contribute the most.

Diabetis.—We now let off the reader from the brief review of the *modus operandi* of medicines, for the purpose of calling attention to a disease met with, more or less frequently, in every physician's practice, and which has proved to be a kind of *opprobrium medicorum*. We allude to *diabetis*. Its prominent symptoms are *excess* in the urinary secretion, and *sugar* in the urine. Its cause was at first referred to the kidneys, thence to the stomach, thence to the cerebellum, and now to the *liver*.

The researches in organic chemistry show that a considerable proportion of the food we eat contains sugar. A large portion is also produced in the body by the action of the pancreatic secretion on the starch contained in food. This sugar is taken up from the intestines and conveyed with the blood of the portal vein to the liver. In the liver it undergoes a remarkable change—it acquires the capability of becoming *oxydised in the lungs*, so that it becomes subservient to the purposes of forming carbonic acid, in the generation of animal heat, and of serving as nutriment to the adipose and cartilaginous tissues. Two things, therefore, appear to be essential, with

reference to the sugar introduced into the system with the food, and that which is transformed from starch by the agency of the pancreatic secretion, viz: That it be dissolved in blood and acted on by the liver. Now, the cause of diabetis appears to be this. The sugar is not acted on by the liver, so as to render it capable of being oxydised in the lungs, but passes through the organ unchanged, and therefore it proceeds unchanged through the lungs, and being thus unfitted for the purposes of respiration or nutrition, it is eliminated by the kidneys, its presence in these organs stimulating them to an increased flow of urine.

Such is the explanation given by Bernard and Pavey, of the pathology of diabetis. This explanation, however, throws no further light on the treatment. This remains in *statu quo*, and is proverbially inefficient.

Accepting this view of the pathology, we can see no great propriety in excluding from the diet of the patient articles containing sugar, or that are changed into sugar. It seems that the trouble is in the liver, and remedies, as a consequence, should be addressed to this organ. But what is the character of this trouble. Is it a lesion of function, or a lesion of structure, or both? We are told by Bernard that the liver fails to capacitate the sugar that passes through it for oxydation in the lungs. Why does it fail? The answer to this question may do something in the way of suggesting remedies.

Function of the Liver.—What is of more consequence than a knowledge of the functions of the liver, and yet what do we know about it?

The organ has, in all ages, figured largely in pathology. It has been accused, at one time or other, of having a hand in one-half the troubles that affect mankind. Routinists in practice soon find here a convenient point for locating troubles they are unable to diagnose; while the man of science is really puzzled to know how, or in what manner the organ becomes the seat of disease. We have much in the books about "*biliousness*," "*derangement of the liver*," &c. But what do these terms mean? Until we understand something of the physiology of the organ, of course we are unprepared to appreciate a "*derangement*," a departure from the healthy standard.

In past times, the organ has been regarded as *excretory*, as designed to eliminate useless, worn out matter. But since Berzelius found that one thousand parts of fresh human fœces only contained nine

parts of a substance similar to bile, the theory of the liver being a direct excreting organ has begun to be received at a discount. According to the latest experiments, we have eight ounces of bile secreted in twenty-four hours, and poured into the alimentary. Only a trace of this, according to Berzelius, is found mixed with the fœces. In other words, if we credit the most trustworthy researches, a man secretes, daily, about fifty times as much bile as can be detected by the matters discharged by the intestinal canal. What now becomes of the bile? Leibig, (Chemistry applied to Animal Physiology,) some years since, suggested that, it being composed of hydro-carbonaceous products of the disintegrated tissues, is absorbed from the alimentary canal, and finds its way to the lungs, where it is oxydated, and thus serves the purpose of producing animal heat. There may be some truth in this view. But it is now known that if all the solid portion of the bile were re-absorbed from the alimentary canal it would not furnish more than one-twelfth of the total amount of hydro-carbon eliminated by the lungs. This theory of Leibig has been, as a consequence, very essentially modified. The hydro-carbonaceous matters resulting from the disintegration of the tissues, are supposed to be converted into two resinous acids, the *glycocholic* and the *taurocholic*, a certain fatty substance, *cholesterin*, and pigments. These acids and fat, after serving, as is supposed, some purpose in digestion, are re-absorbed and undergo oxydation, whereby they are carried off in the form of carbonic acid and water. This, it will be observed, makes the office of the liver *indirectly* excretory. Thus we have the bile disposed of—the liver having the business assigned to it of “gathering up the chips,” and preparing them for the combustive process by which the body is kept warm.

Magendie and Thompson some time since called attention to the circumstance, that when large quantities of food containing *starch* or *sugar* have been employed as food, the blood is found to *contain* sugar. More recently Bernard has shown that the blood of the hepatic vein, and that of the right auricle, contain more sugar than does the blood of the vena portæ. Furthermore, this author has shown that the liver can actually *generate sugar*, this article being found in the hepatic veins when none at all could be found in the vena portæ. What now becomes of this “*liver sugar?*” It is said that it goes from the liver through the right side of the heart to the lungs for the purpose of assisting the bile in keeping up the calorifying process; a part of it, as in herbivorous animals, where the

quantity is large, being converted into fat, and thus serving as nutriment to the adipose tissues. This makes the organ again *indirectly* an excretive organ, and, besides, conveys the impression that it is concerned somewhat in nutrition.

The sugar generating faculty of the liver seems, from some recent experiments, to be under the influence of the nervous system, for if the medulla oblongata be irritated in that part which lies in the groove between the corpora restiforma and corpora olivaria, the production of sugar by the liver is so much increased that artificial diabetes is produced.

The experiments of quite a number of physiologists lead to the conclusion that the liver is also in some way or other concerned in the generation of *fat*, and this seems to be sustained by the same arguments which support its agency in the production of sugar. While capable, therefore, of the exercise of both offices, the production of sugar and the production of fat, it seems that the former is most active in carnivorous, the latter in herbivorous animals.

Without premising any more on the physiology of the liver, we may take what has been noticed in this respect, as the stand point for a few thoughts on the diseases of the organ. These, of course, must relate either to function or structure. To the former we shall only, however, devote a few remarks.

The functions of the organ being *indirectly* excretive and *partly nutritive*, we would necessarily be led to think of the symptoms which indicate a departure from such standards. And what are they? What sign is hung out to show these alterations? In what do they consist? Do they consist in increased action, diminished action, or in perverted action? When the liver separates too much glycocholic and taurocholic acids from the blood, or too much cholesterolin, what effect on the economy? Would such a state of things give rise to emaciation, increased respiration, etc.? Or what effect on the intestinal canal simply from the presence in it of more than the normal amount of bile? Suppose, however, the opposite condition—diminished action. What now results to the system? The organ fails to separate the hydrocarbonaceous matters, the disintegrated tissues, and hence these substances remain in the blood. Does this matter poison the blood like retained urea? Is there not a difference? The latter is a direct excretion, the former not, according to physiology, as we have seen. If the elements of the bile are not separated by the liver, and thus arranged for oxydation

may they not pass directly to the lungs and be there oxydated without occasioning any inconvenience? Or, what would seem equally practicable, at any rate so far as the cholesterin is concerned, pass directly to the nourishment of the adipose tissues. We are in the habit of saying when the surface is discolored a little, that the patient is "*bilious*"—too much bile. But what do we mean by this term? Do we mean that the "*chips*" are not gathered together and burnt up?

We have seen that the liver generates sugar when moving according to the laws of health. Now what results, we may again enquire, to the system, when it is tardy in this office; or in the opposite state, when it overworks itself. Take for instance the case of a carnivorous animal with a liver in the passive state so far as the production of sugar is concerned, and what disturbances have we of its organism? Are the effects similar to those resulting from deficiency in glycolic acid, taurocholic acid and cholesterin, or are they different? Then, again, we might enquire, what trouble when the organ generates too much sugar? What *even are the symptoms of a derangement in the sugar-making faculty of the liver?* We have been told that when the liver fails to capacitate its own sugar, or that that passes through it by way of the portal vein, for oxydation in the lungs, that we have diabetis—the sugar passing off by the kidneys. But is not this a mere hypothesis? Let us hear first the results from the generation of too much, or from the generation of too small a quantity of sugar.

Two cases of Ovariectomy. By J. W. HAMILTON, M.D., Professor of Surgery in Starling Medical College.

CASE 1. Miss E. F. T., aged 25, a sprightly, intelligent young lady, from Marsailles, Hardin county, O., came under my observation in the early part of October last. Repeated examinations, made in connection with Professors Carter and Smith, elicited the following:

In February, 1857, the patient observed a tumor of the size and shape of a hen's egg, in the situation of the left ovary. After a few weeks she ceased to observe it, but soon afterwards she became conscious of enlargement in that region. At the end of a year this

had advanced to such a degree as to attract the attention of her female friends. During this time she was the victim of severe neuralgia. She ceased to menstruate in February, '58. In May last had scarlatina; in September had chills. For more than a year she had not been able to pass a whole night in the horizontal posture, except occasionally from the free use of morphine. For the last eight months had very rarely eaten without vomiting, and for about an equal period has not been able to sit up a whole day. Appetite poor, emaciation very great, the estimated weight being 70 pounds, without the tumor; urinary secretion about 10 ounces in the twenty-four hours. Pulse 108, with increased frequency in the afternoon and evening.

An examination per vaginam resulted as follows: the os uteri was found against the symphysis pubis; the soft parts about the urethra were edematous; the cervix seemed short; Simpson's sound introduced into its canal would only pass about half an inch. Uterus firmly fixed, without tenderness or fluctuation. A hard mass, believed to be the retroverted body of the organ seemed to lie behind and above the posterior lip of the os. An examination per rectum gave satisfactory evidence of the correctness of this supposition, revealing the presence, furthermore of two nodules, of the size of hazel nuts in the recto-vesical septum. These were supposed to be either enlarged lymphatic ganglia or hemorrhoidal tumors.

The abdomen was greatly enlarged. A firm fluctuating mass completely filled it, and distended it to its utmost capacity. The fluctuation was present in every part, but was comparatively obscure in the iliac regions. Percussion elicited perfect dullness except about the epigastrium and right and left hypochondriac regions. The enlargement was greatest on the left side. Could not learn that the tumor was ever moveable.

A careful consideration of all the circumstances of the case resulted in the conclusion that within a very few months, at farthest, the case must result fatally. Besides the sufferings of the patient were such as to lead her to prefer any thing which gave even the slightest hope of relief, to her present condition. She was informed, that commencing the operation, there was one chance in five or six that we might be obliged to abandon it as impracticable, and that from such abortive effort there was one chance in four or five that her death would be the result. That in promising cases, the operation gave about equal chances of death or recovery, but that her

case was one of less than ordinary promise. This statement being distinctly made, she was informed that our united judgment was in favor of an operation, as it gave the only rational *hope* of either recovery or relief. She decided, very promptly, in favor of the operation.

Oct. 18, P. M. Arranged to have the bowels evacuated by a dose of *Oleum ricina*, to be followed by an enema, and the room raised to a temperature of 82° , so as to have the patient and apartment in readiness for an operation on the following day at 11 A. M.

Oct. 19, 11 o'clock, A. M. According to previous arrangement, met my colleagues in the faculty of Starling Medical College, with my friends, Drs. Sacsche, Hills, McMillen and Barr. Finding the room and patient duly prepared according to the instructions of yesterday, we at once proceeded to the operation.

The patient was placed on a table in the usual manner, and anesthetized by the use of chloroform. The bladder having been emptied by the use of the catheter, an incision was made half way between the umbilicus and pubis two and one-half inches in length. Thus exposing the peritoneal covering of the cyst, and the walls of the incision retracting, an abundance of tissue resembling very vascular omentum was exposed. The finger was now introduced to test the character of the adhesions. These, consisting of the above omentum-like tissue were easily separated. Having thus come to the conclusion that the operation was practicable, we proceeded to its further execution. The incision was extended so as to reach from a point two inches above the umbilicus to the symphysis pubis, a distance of ten inches. The sides of the cyst having been separated, its anterior portion projected prominently through the incision. At this stage, by the use of a very large trochar and canula, twenty-four pounds of rather thick brown serum were drawn off. The summit was now separated from its connections and drawn out. The upper part of the posterior aspect was free from attachments, but as we descended toward the brim of the pelvis they were abundant and most difficult of separation. On reaching the bladder it was exceedingly difficult of identification. It seemed to be a sub-cyst, developed in the walls of the main one. A sulcus was however, finally traced by peeling the shreds of lymph from above downwards, and observing that they passed between them. The vascular supply was so abundant in this situation that a resort to cutting instruments was not admissable. Though separated exclu-

sively with the fingers the hemorrhage was, by no means inconsiderable. The entire brim of the pelvis, and inner aspect of the false pelvis with both ovaries and broad ligaments were the sites of equally powerful attachments. The separation of them was most tedious and difficult, and of necessity was effected without the use of cutting instruments. The uterus was free and deeply wedged down into the true pelvis.

These efforts at detachment were successful in separating the cyst from everything except the ovaries, and a small portion of the broad ligament of the right side. These were inseparable to everything not involving the use of cutting instruments. They were treated as pedicles, being transfixed, and ligated with ligatures consisting of four sizes of saddler's silk. The mass being divided just above them, the ligatures were allowed to hang from the lower part of the wound, where they were fixed in the form of the figure of 8 around a large needle transfixing the walls of the incision for that purpose.

The external wound was closed in the usual way by the use of long strips of adhesive plaster, interrupted sutures, &c. The operation was tedious and difficult, occupying more than forty minutes, and inducing extreme prostration. The latter part of it was performed amid the most anxious apprehensions for the safety of the patient.

Seven o'clock, P. M.—Reaction very imperfect; pulse 140; extremities cold.

Oct. 20, morning.—There is fair reaction; extremities comfortably warm; pulse 144.

Oct. 24.—There has been incessant vomiting of greenish fluid, containing in suspension, numerous shreds and floculi of a grass green color. Pulse varied from 140 to 155 per minute. External wound closed by first intention, except at the lower part, from which a rather abundant discharge of opaque serous fluid intermixed with shreddy sloughs escaped. There was some tympanitic distension, and some tenderness during this time. The patient's stomach would only bear the slightest quantities of light slops, and even under this regimen suffered greatly from hiccough with incessant burning sensation at the stomach, and constant disposition to vomit.

Oct. 25-28.—During this time there was gradual improvement. The wound opened slightly when the stitches were removed; pus became laudable; pulse came as low as 113; bowels kept in a state

of constipation by the use of morphine ; urinary secretion becoming free.

Oct. 30.—Since last entry there has been gradual improvement ; pulse has ranged from 108 to 120 ; vomiting has subsided, and there is slight relish for food ; tongue moist ; patient is much more comfortable than for months past ; evacuates twenty-four ounces of urine during each twenty-four hours, without assistance from the catheter ; on removing needle at the lower extremity of the wound about three inches of it are shown not to have united. This however is granulating nicely. An ounce or two of laudable pus escapes each day. Bowels still constipated. Ordered injections of beef soup, to be repeated three times each day.

Nov. 3.—There were to-day for the first, free fecal evacuations ; case progressing satisfactorily.

Nov. 10.—Ligature came from left ovary ; patient sits up three or four hours per day ; has a most lively appreciation of the luxury of sleeping and eating.

Nov. 15.—Ligature came from right ovary ; during the last few days the purulent discharge has been rather free ; patient has not seemed to gain ; pulse has been as high as 132 per minute.

During the last two weeks of the month of November the discharge gradually diminished in quantity and her pulse came down to 114. She suffered incessantly however, from a cough which was obviously induced by coal dust, never having been accustomed to it. On account of its serious effects upon mind and body she was removed to Kenton, Ohio, on the first of December, and a few days subsequently, a distance of eleven miles, over one of the worst mud roads in Ohio, to her home. We received a letter dated three weeks after her removal, informing us that the cough had entirely subsided, that the pulse was less than 100, and that the discharge had pretty much ceased.

The most striking feature of this case relates to its pedicles. As we ordinarily understand these it *had none*, but such as they were, it had *two*. That this may be understood, we must remark that the walls of the cyst were very thin, and that the ovaries seemed merely to enter into and constitute so much of them at that point. Although the history of the case renders it certain that the cyst was formed from the left ovary, its attachment to the right was equally intimate, and more extensive, because of enlargement of the ovary and the impracticability of clearing the corresponding broad ligaments. We believe this feature of the case to be without parallel.

A practical point is worthy of notice. Both pedicles were transfixed, and each half ligated as usual. The cord was made of four sizes of saddler's silk. None of these were cut off, so that 16 sizes, (a pretty good seton) were brought out from *each side*. This course was suggested to us by a conviction that the long shreds of lymph, and the large pedicles spoken of, could not fail to produce extensive and protracted suppuration and sloughing. We regard it as having been a saving clause in the case. Without the opportunity for escape of fluids thus presented, it would probably have been fatally aggravated by their presence.

The cyst weighed but one and three-fourth pounds, making the weight of the entire tumor twenty-five and one-fourth pounds, or more than equal to one-third the estimated weight of the patient. It had in its walls a single sub-cyst, large enough to hold ten ounces.

CASE II. On the 22d of Oct. last, we received a message at the hands of a brother of the patient, requesting us to see Mrs. D., a resident of Jackson Tp., Franklin county, Ohio. Our friend Dr. Robinson, of Lockbourne, Ohio, was present at our interview with the messenger, and at once consented, as the case was in his vicinity, to see it with us. Accordingly Dr. Drury of Columbus, accompanying us, we saw the case for the first time, in company with these gentlemen, on the following day.

Found Mrs. D. to be a large woman, aged 36, apparently of great candor and good sound common sense, of good constitution, though greatly emaciated and very feeble, with a pulse of 90. Learned that she had suffered three miscarriages, the last of which occurred ten years previously; that eight years previously she noticed a small kidney-shaped swelling in the situation of the right ovary; that it had grown, at times rapidly, with quiescent intervals, so that the greater part of its present dimensions had been attained some months previously; that till within two or three months it had been perfectly moveable, falling about in the abdomen from change of posture; that the last two or three months however, had been attended with especially rapid increase in size; that furthermore, her general health having been habitually good, she had never taken medicine, or been subjected to treatment on account of the ovarian difficulty; that six weeks previously she had an attack of colic, on account of which and constipation following, she was

under the care of a neighboring physician for a few days ; and that since that time her feebleness had been such as that she had been pretty much confined to bed ; that she had menstruated till within a few months, &c.

The tumor, in reference to which our aid was sought, we found to be an ovoid mass, extending from the right illiac region to the left hypochondriac and epigastrium, the transverse dimensions of which were such as quite completely to fill the abdominal cavity. Fluctuation was very distinct through its long diameter and about the two extremities of that admeasurement, but was never detected between points transversely related to each other. The anterior and left aspects seemed soft and elastic, but the right was very firm and unyielding.

Exposing the vagina and cervix uteri after the method of Sims, we found both these parts healthy, the former, however, was corrugated, and the latter acuminate and elongated to a remarkable degree. No fluctuation was presented in this direction. Subsequently Simpson's sound was carried near two inches into the uterus with the utmost facility.

Our diagnosis was an admixed cystic and solid ovarian tumor, the cystic portion of which was supposed to predominate.

Although we regarded this as a more eligible case for an operation than the preceding one, we gave a similar statement of its hazards, making it stronger, however, and repeating it time after time, and stating to the family that we wished the statement repeated to their neighbors, so that if we should conclude upon an operation, all its hazards might be distinctly understood and assumed. Directing the liberal use of whiskey, quinine and iron, we agreed to see her again within a fortnight.

Nov. 2.—Saw Mrs. D. again ; pulse 84 per minute ; appetite good, sleeps fairly, is anxious for an operation. Her condition being very fair I consented to undertake it. But as the cold season had arrived, and the small cabin in which she lived was very open overhead, and had but a single small window, I declined performing it there. I however made an engagement to perform the operation on the 13th of Nov., at Starling Medical College, providing suitable rooms for the purpose. After the operation was decided upon, I presented the most favorable aspect of the case to the patient and continued to do so throughout.

Nov. 13. The patient's bowels having been evacuated by the use of castor oil and an enema, and the bladder emptied, the patient was placed on the operating table, in the surgical amphitheater, the temperature 85° and the entrance carefully guarded. Present—the class of Starling Medical College, with the faculty, and a considerable number of other physicians.

Laying open the abdominal parieties to the extent of eight inches the tumor was at once exposed. Commencing the work of separation, the adhesions were found astonishingly firm, so much so that it was at once regarded as impracticable, either to recognize or separate them. Having succeeded in effecting the separation of a surface as large as a hand or two, amidst the utmost obscurity as to the line of connection between the tumor and the peritoneum, we decided the operation as impracticable, and abandoned it.

Introducing a large trochar towards the lower part of the incision, we failed to reach fluid. Introducing it at a higher point and carrying it nearly its whole length, we still failed. This was a disappointment, for, though we expected to be obliged to penetrate to some depth at these points, we had no doubt of our ability to reach fluid. Introducing ten silver sutures, applying adhesive strips, &c., the patient was covered with warm buffalo robes and carried a distance of twenty feet to her room, which was being kept at a temperatures lightly above 80°.

6 o'clock, P. M. Patient comfortable, but irreconcilably disappointed. Pulse 37; serum escaping at the rate of about a half pound per hour.

Nov. 14, eight o'clock, A. M. Pulse 110. The tumor is very tense and pulsates like an aneurism. Serum escaping freely, in connection with the extrication of most offensive gas.

6 o'clock, P. M. Pulse 136, very feeble, serum very irritating to the parts over which it runs; nurse supposes that a gallon escaped since my last visit. Patient anxious, evidently sinking.

Nov. 15. Patient expired at 5 o'clock, A. M.; forty-two hours after the operation.

12 o'clock, M. The friends cheerfully consented to a post mortem, in the surgical amphitheater, but as the hearse was in waiting to remove the body to her home, I was not allowed time to send for my colleagues or other physicians. Present—the class.

The offensiveness about the wound was such as to make the examination the most disagreeable duty we ever performed. Laying

open the abdominal parieties, we found it filled with a mass, black as tar, and as fragile on its surface as wet brown paper. Its anterior and lateral surface was perfectly adherent, though slight effort was sufficient to separate it or tear its outer portion to pieces. The posterior surface was free, and all the organs of the abdomen and pelvis were free from both attachments and disease, but were discolored, more or less, wherever they touched the sphacelated mass. The pedicle was three and a half inches long, and but little larger than a very large rye straw. It was attached to the right broad ligament. at its junction with the right ovarium.

Description of Specimen.—The tumor was not weighed. Its weight, however, was estimated at eighteen pounds. It was about fifteen inches long, and shaped like a long watermelon. Cutting it open, we found the right side, and masses scattered through it irregularly, dense and fibrous. The left side and summit consisted of a very succulent, semigelatinous substance, with occasional bands of fibrous tissue, and very numerous sinuses. The lower part consisted mainly of sinuses or cysts, the largest of which would hold three or four pints of fluid; another, about a pint. The most of them being small, at the same time very numerous, however, they presented the appearance, in an exaggerated degree, of a cut surface of very coarse sponge. All these cysts were empty, and yet not collapsed. While the surface was black, sphacelated, and perfectly fragile, the central parts were firm and apparently only gangrenous.

Interesting questions arise in connection with the adhesions in this case. As one of my colleagues expressed it, they were as strong "as the integument," at the same time so perfectly blending the parietal peritoneum, and the peritoneal covering of the tumor, that their relation was just as intimate as those of the different coats of the skin. Yet, undoubtedly, the mass was perfectly free from adhesions three months, or less, previously. In making up our estimate of the strength and separability of these, we take *time* into consideration as a principal element. We are satisfied, after mature reflection, that this is a mistake. The effusion and organization of lymph on serous surfaces, under favorable circumstances, is a rapid process. We have a specimen of false membrane, taken from the costal pleura ten days after its being punctured by a knife. Its organization was such that portions could not be separated at all. The specimen is so thick and strong as to require a strong effort to lacerate it.

In the celebrated case of Pcol, although the pericardium and endo

cardium were lacerated by a ball, yet, within ten or twelve days, these parts were so perfectly, and yet so strongly adherent as to leave no trace of the orifice.

Why was this sphacelation so rapid, and from so slight a cause? There is abundant explanation in the peculiar circumstances of the case. The pedicle was remarkably slender and long. It did not contain an artery a line in diameter, although there may have been several smaller ones. At all events, considering the size of the tumor, and the very trifling size of the pedicle, it is very evident that the circulation and vitality must have been exceedingly slight. The introduction of the trochar and the injury done to the surface were sufficient to excite a grade of action, which, though slight, was sufficient at once to exhaust the feeble grade of vitality.

It attacked first, and was most advanced in the surface, because, probably, inflammation was most active and advanced in the peritoneal covering of the tumor and for obvious reasons sphacelation was more advanced and perfect in the adhesion than elsewhere, because they were not only adventitious, but recent.

Would it have been better to dissect out this tumor? We have no doubt but it would have been, had it been practicable. As far as hemorrhage is concerned, we do not think that there could have been any difficulty whatever. But the tumor not being lessened by the trochar, it would have been necessary to make the dissections coextensive with the parietal peritoneum, with an incision from the pubis to the ensiform cartilage. Owing to the intimacy of the blending of peritoneal layers, the operation would almost inevitably have been so protracted as to lead to the death of the patient on the table.

A word in regard to the success of Ovariectomy in Ohio. In 1854, Dr. P. J. Buckner, now deceased, made a report to the State Society, that was supposed to contain all the cases operated on up to that time. It included eleven cases, of which six were successful and five fatal. Since that time, without having made this a special subject of attention, we have learned, through private channels mainly, of the following cases:

Professor Howard operated twice, found inseparable adhesions in one case, and abandoned the operation as impracticable, his patient dying within a few days. The other was cured and is still living. One esteemed friend operated twice, one patient dying, one recovering. Another undertook it twice, and was obliged to abandon it as

often, one of the patients dying, one surviving. Within a few months, an eminent surgeon performed the operation, his patient dying within a few hours. Another made a moderate incision through the abdominal parieties, his patient vomited, the tumor was thus forced into the external world, when ligating a small pedicle, the operation was completed. The patient recovered. We have been informed of three cases by another gentleman; two fatal, one successful.

Of the operations performed since 1854, that we have learned of, accordingly, there are thirteen, five successful and eight fatal. So that up to this time we have in Ohio twenty-four cases, eleven successful and thirteen unsuccessful. This is probably about an average result.

We mention these cases without the use of names, because our information being mainly indirect, and from private sources, such use is unwarranted and might do injustice.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

A New Method of Amputation. By M. MAISONNEUVE.

M. Maisonneuve read before the Académie des Sciences, April 26th, 1858, a note on a new operation for Amputation, which he calls the *diaclastic method*. The peculiarity of this method is, that for its execution neither the knife is used for dividing the muscles, nor the saw for cutting the bones, nor permanent ligatures to arrest hæmorrhage; and that, contrary to the ordinary methods, the division of the bone constitutes the first step of the operation, and precedes the division of the soft parts.

The principle object of this method is to avoid the occurrence of purulent infection, by substituting for the ordinary process of division by cutting instruments, the process of breaking, tearing, and extemporaneous ligature, the contusing action of which obliterates effectually the vascular orifices.

M. Maisonneuve uses for the execution of this method an *osteoclast*, or instrument for breaking the bone; and a powerful *serre-nœud* for the division of the soft parts. The author describes the operation in the following manner:

“The patient having been brought under the influence of chloroform, the surgeon applies the osteoclast precisely on the spot where he intends to break the bone, taking care to protect the soft parts in

contact with the instrument by thick compresses ; then, giving the screw several turns, he produces the fracture ; he removes the instrument, and immediately substitutes the *serre-nœud*, in the metallic loop of which he embraces the member ten or fifteen centimetres below the point of fracture ; then, turning the screw, he gradually compresses the tissues until the circulation in the vessels is interrupted. This done, he divides the muscles to the bone by a circular incision with the bistoury, two or three centimetres below the *serre-nœud*, tears off by a twisting movement the extremity of the member which is attached merely by some adhering portions of muscular tissue, and finishes the operation by continuing to turn the screw of the *serre-nœud* until the tissues embraced in the loop of the ligature are completely divided. If the last step of the operation is conducted with prudent slowness, not a drop of blood will ooze from the wound resulting from the amputation, whatever the amputated member may be."

This singular method has been applied with success to five amputations of the leg and to one of the forearm,—*Archives Générales*, June, 1853, from *Medico-Chirurgical Review*.

Rationale of the Saccharine Treatment of Diabetes.

Dr. John Sloane, in a paper read before the Leicester Medical Society (April 20, 1858), gives the following rationale of the saccharine treatment of diabetes :

"Glucose, the variety of sugar found in the urine of diabetics, is generated in the livers of animals throughout the animal kingdom, almost wholly irrespective of the nature of their food. The glucose secreted by the hepatic cells passes into the hepatic veins, thence into the inferior vena cava, and through the right side of the heart to the lungs, where, being exposed to the atmosphere, it sometimes completely disappears. Mr. Bernard has found sugar in the livers of mammals, of birds, of reptiles, of fishes, of molluscs, and of articulated animals. He has found it in omnivorous, herbivorous, and carnivorous animals. That the secretion of sugar is independent of the nature of the food, he proves by many experiments, of which I shall mention the following. He fed dogs exclusively on flesh for six or eight months ; and when they were killed at the expiration of that period, he found as much sugar in their livers as in those of dogs fed upon a mixed diet. Owlets taken in their nests were fed exclusively on raw bullock's liver for three months, and were then killed ; their livers always contained the normal quantity of sugar. Two dogs were fed solely on flesh, and two on amylaceous and saccharine food ; they were all killed at as nearly as possible the same period of digestion, and the results of the chemical examination of their livers showed that the quantity of sugar secreted did not depend on the nature of their diet.

“Rollo recommended the use of fat for diabetics. M. Thernard and Dupuytren made them eat lard. We have fed dogs with lard and axunge ; and we have found this very curious fact, that, under the influence of this alimentation, the sugar diminished in the liver absolutely in the same manner as if the animal had been kept fasting. In dogs to which M. Bernard has given nothing but pure water, he has found the secretion of sugar kept diminishing, and it ceased to appear about three or four days before its death. For the first thirty-six hours, the quantity continues considerable, but during the following days it diminishes very rapidly.

“A dog, having fasted thirty-six hours, had a copious repast of boiled sheep’s head, and, three hours afterwards, was killed. The blood in the portal vein, previous to its entrance into the liver, contained no trace of sugar ; whereas, in the blood from the hepatic veins, there was a considerable quantity. This experiment, writes Bernard, would alone suffice to cause one to admit, as a natural and necessary conclusion, that the sugar is produced in the liver ; yet we have accumulated proofs of every kind about this proposition ; and we have shown that the hepatic tissue constantly contained sugar, and that it was the only tissue of the body which offered this character.

“In animals fasting, the blood which arrives at the liver presents no trace of sugar ; that which leaves it contains a considerable quantity. Inversely, the blood which arrives in the lungs contains sugar ; and that which leaves it presents no trace of this substance. The sugar in this physiological state remains hidden between the liver and the lung, and does not show itself at the exterior. This statement is true only in an animal fasting. When the digestion commences, the quantity of sugar gradually augments ; yet during the two or three hours following the ingestion of aliment, notwithstanding the increase of the saccharine secretion, all the sugar can be destroyed before it arrives at the arterial system ; and it is only after the lapse of time that the production of sugar, surpassing the limits of destruction, becomes temporarily excessive in the organism. At this period of digestion, one finds sugar in all the vessels of the body, arterial and venous, and even in the renal arteries ; but the proportion is too slight for any of the sugar to pass in the urine. Yet we shall see that, under certain physiological circumstances, the quantity of sugar can be increased to the point that it passes off in the urine without the animal being diabetic. Under the ordinary circumstances of digestion, this species of saccharine overflowing is manifested equally with animal or amylaceous diet, and it lasts about three or four hours. It is not less than six or seven hours after a meal that the excess of sugar in the blood commences to disappear, and that the equilibrium between its production and its destruction tends to re-establish itself as before digestion. This species of oscillation, which the glycogenic function presents, it is very important to know ; for in the pathological state (diabetes) we find exactly the same phases, with the exaggeration we should expect in this malady. Different observers—Rayer in France, and

Traube in Germany—have remarked that there are diabetics which do not pass sugar in their urine, except at the time of their digestion; and that, in the interval, their urine does not contain sugar. This phenomenon can be reconciled very naturally with the physiological fact which has been pointed out to you. There is nothing essentially different between the normal state and the pathological symptom, save the intensity of the phenomenon caused by a deviation of vital activity.

“The sugar is formed from the albuminous substances; and this sugar is the result of the physiological action of the liver upon those principles, which are divided so that their oxygen, hydrogen, and carbon, are grouped so as to form sugar, whilst their azote enters into other combinations, and probably into the azotized principles of the bile. One does not know, indeed, any other origin for the saccharine matter, which cannot be produced in the intestine without digestion. Experiment has shown us that during alimentation by means of albuminous substances, the intestine and the blood of the portal vein never contain saccharine matter of any kind. Neither gelatine or flesh produce saccharine matter in the intestinal tube by the known digestive processes. The amylaceous matters taken as food enter as sugar into the portal vein, and arriving at the liver in this state, are then destroyed by this organ and changed into an emulsion *par une matiere proteique speciale*. We have said that the sugar introduced into the intestinal tube does not augment the quantity of this matter contained in the liver, but that it is there destroyed, and causes the appearance of an emulsive substance. That the sugar introduced into the intestinal canal does not augment the quantity of this matter contained in the liver, M. Bernard shows by the following experiments. He takes two rabbits, whose urine he first finds by testing, to be free from sugar. Into the stomach of one he injects a quantity of sugar in solution, with some ferrocyanide of potassium. Beneath the cellular tissue he injects half the quantity of an exactly similar solution. He examined their urine an hour afterwards, and he finds in that of the first not the least trace of sugar, while the urine of the second presents it in considerable quantities. But you may say that this difference may be accounted for by the intestinal absorption being less rapid than the subcutaneous; but in both the ferrocyanide of potassium was readily detected in the urine. This will prove that the absorption is equally effectual in the intestine as under the skin, but that, in the first case, the solution has abandoned one of its constituents, the sugar, in traversing the liver; whereas this has not taken place in the second instance. He arrives at similar results in the following experiments. Through a small opening in the abdomen of the rabbit, he injects a quantity of the same solution into one of the branches of the portal vein; and into the jugular vein of another rabbit he injects the same quantity of the same solution. It is clear that, in this mode of operating, we cannot have any difference in the absorption, as in both cases we introduce the substances directly into the blood. Nevertheless, we obtain exactly the same result; that is to say, that in the rabbit, in which we injected by the jugular, the sugar has passed into the urine with the

ferrocyanide of potassium, and with very great rapidity; whilst in the rabbit injected by the portal vein, the ferrocyanide of potassium alone will have passed into the urine, where one cannot find the least trace of sugar. These experiments are very conclusive. Bernard proves by experiment that starch, taken as food in the intestine by the influence of the pancreatic juice, becomes converted into sugar; and this passes into the portal vein. That sugar is destroyed by the liver, receives further confirmation, he states, by the facts known in the fattening of cattle. You all know that animals fatten most by the use of food in which starch predominates; that the geese and the ducks, in which the fat livers are artificially produced are gorged with a *pate* of maize or other amylaceous food: that the fat formed by an animal is not in proportion with the adipose matter which it takes; that, on the contrary, the animals which only eat fat, far from becoming fat, get lean rapidly. Hereafter it is not only the biliary secretion which we shall have to look upon in the liver; it has two other functions of capital importance—one the production of sugar, which is dependent upon the aliment containing albuminous matters; the other, the production of fat, which is dependent upon the amylaceous and saccharine matters in the food.

“Cane-sugar is never destroyed; it is constantly eliminated by the urine when it is injected directly into the blood; but this sugar, when in the intestine, is in part, at least, transformed into glucose. The latter, on the contrary, injected into the blood, can be destroyed in certain proportions.

“When we prick the mesial line of the floor of the fourth ventricle, in the exact centre of the space between the origins of the auditory and pneumo-gastric nerves, we produce an exaggeration of the hepatic (saccharine) function, and of the renal secretion; if the puncture be effected a little higher, we very often only produce an augmentation in the quantity of the urine, which then frequently becomes charged with albuminous matters; while, if the puncture be below the indicated point, the discharge of sugar alone is observed and the urine remains turbid and scanty. Hence it appears that we may distinguish two points, of which the inferior corresponds to the secretion of the liver, and the superior to that of the kidneys. As, however, these two points are very near to one another, it often happens that, if the instrument enters obliquely, they are simultaneously wounded; and the animal's urine not only becomes superabundant, but at the same time saccharine. The urine becomes saccharine in from one to two hours after the operation but seldom continues for more than one day.

“The secretion of sugar is not under the direct influence of the pneumogastric nerve; for if it be divided before irritating the floor of the fourth ventricle, sugar still appears in the urine. Bernard believes that the influence is transmitted by reflex action through the ganglia of the sympathetic.

“There is a phenomenon which is manifested, for example, when, after fasting a certain time, a great quantity of sugar is taken. The

intestinal absorption then proceeds with extreme rapidity. A great quantity of sugar arrives in mass in the liver ; the mechanical circulation much prevails over the chemical ; the sugar is poured into the general circulation in proportion much greater than occurs in the normal state ; and it passes then into the urine, where its short-lived presence can be found for a certain time.

“ M. Bernard, after a great many experiments in reference to the subject, has proved that there is a species of election in the excretion of matters which pass out of the organism. Sugar is eliminated in two ways only—by the kidneys, and by the mucous membrane of the stomach. When sugar is ejected into the blood of an animal to saturation, and puts it for a time into a state of diabetes, we do not find sugar in the saliva, in the tears, pancreatic juice, bile, nor perspiration ; whilst the urine and gastric juice contain it in proportions more or less notable. These results entirely resemble those obtained in diabetic patients. Lehmann states, however, that he has obtained sugar from the saliva of a diabetic. The presence of sugar has been pointed out in the expectoration of diabetics. Bernard admits that sugar can be had in a notable quantity in the expectoration. But, he writes, we must not confound the bronchial mucus which these patients, almost always phthisical, in the last stage of the disease expel in abundance, with the salivary secretion properly so called ; it is the mucosities formed in the lung which contain the saccharine matter. Nevertheless, this fact is not constant ; for M. Raynor has reported to the Society of Biology a case in which the expectoration of a phthisical patient examined by M. Wurtz did not contain sugar. Bernard proves by the following experiments the statements regarding the election in excretion of matters which pass out of the organism.

“ He takes a dog with a parotidean opening, into which he inserts a tube. Nothing flows by this tube, which proves that the secretion is not continuous. By putting in the mouth some vinegar he excites the flow of saliva, which passes out of the tube rapidly in large drops. He next injects into the jugular vein of the animal a solution containing sugar, prussiate of potash, and iodide of potassium. Immediately after this injection the salivary secretion is again excited in the same way. The saliva is received into three glasses. One is examined for sugar, and none is found. The sugar, therefore, does not pass in the saliva. The second is examined for prussiate of potash, and it is not present. The third is found to contain iodide of potassium. This substance then passes immediately into the saliva, whilst the prussiate of potash and the glucose, equally soluble, cannot be found. In the saliva extracted before the injection, none of the substances exist. In the urine of the same animal, after the injection, the prussiate of potash is found in considerable quantity, and the iodide of potassium in small proportion. As regards the sugar, there is none yet, but we shall find it presently ; it requires an hour or more for the sugar to appear in the urine.

“ The urine then eliminates all these substances in a manner more

or less rapid. The prussiate of potash appears first, and the glucose last.

“There is another secretion in which the presence of sugar can be found; this is the gastric. The passage of the sugar into the stomach has surprised most of the observers who have seen long since that when diabetics vomited, although they had eaten nothing but flesh, the vomited matters were saccharine. When it was believed that diabetes proceeded from a perversion of the digestive functions, it was considered that the flesh was changed into sugar in the stomach. But one need not now be mistaken; the flesh is not saccharine. Bernard himself has observed that, in diabetics who vomit fasting, in the vomited matters the presence of sugar could be found. But this has only occurred when the disease is at its greatest intensity; and in all those cases, even in the animals which have been rendered artificially diabetic, it is much more difficult to obtain the passage of glucose into the gastric juice than into the urine.

“The sugar is formed, as we have seen, at the expense of the albuminous substances. In the healthy man it is clear that a part only of these matters is consumed for this purpose. The diabetic who forms much sugar expends a very large quantity of azotized material; the blood is impoverished; and, although the patient eats enormously, he gets thin like a man badly nourished. The liver takes in a manner the ration of the other organs, which undergo a considerable attenuation, because the albuminous elements are transformed into sugar.

“M. Bouchardat has prescribed the use of amylaceous and saccharine matters in the food of diabetics. The facts which Bernard has himself witnessed in the practice of M. Rayer prove clearly the utility of azotized aliment. In the regimen of these patients, writes Bernard, vegetable aliments ought to be forbidden, as it is evident they augment the functional activity of the liver. You know, also, that they are excitants of the kidneys; that they are much more diuretic than animal matters. Thus all the herbivora pass much more urine than carnivorous animals. In the azotized regimen, diabetics have the advantage of food which is not diuretic.

“I have at great length reminded you of Mr. Bernard's views regarding the formation of sugar in the animal economy. As some of them are of so novel a character, and so little in accordance with the notions formerly held, I have thought it advisable to mention the experiments upon which he founds his opinions. That they will, upon further investigation, be more or less modified, is not improbable; but they have been very generally received by the most distinguished physiologists and pathologists.

“From M. Bernard's investigations, we learn the following facts of importance in reference to the saccharine plan of treating diabetes:

“1. Sugar may be rationally administered to diabetic patients, inasmuch as the sugar found in the general circulation is almost always secreted by the liver, and as sugar introduced into the intestinal tube in its passage through the liver is there altered and con-

verted into an emulsive substance, which serves to fatten these patients, and thus to counteract their tendency to emaciate.

"2. Substances which contain glucose—such as honey and fruits, should be given to diabetics in preference to those containing cane-sugar, because the latter is not destroyed when injected into the blood, but is constantly eliminated by the kidneys; whereas glucose can be destroyed in certain proportions.

"3. Cane-sugar would be beneficial to a certain extent; as when taken into the intestine, it is in part, at least, transformed into glucose; but if given in too large proportions to be thus constantly transformed, the disease would be probably aggravated by the presence in the blood, and subsequent excretion by the kidneys, of the former variety of sugar.

"4. The glucose should be given in moderate quantities at a time, and frequently, rather than in large quantities at long intervals; because, when much sugar is taken fasting, it is absorbed too quickly to admit of its complete destruction in the liver, and it passes into the general circulation, whence it is eliminated in the urine."—*British Medical Journal*, May 3, 1858, from *The American Journal of the Medical Sciences*.

Letter detailing a case of Criminal Abortion and Infanticide.

We publish the following letter, which appears to have been called out by our article on *Criminal Abortions*, which details one of the most horrible instances of depravity, is rather insanity, which we have ever known. This is one of the effects of advertising abortion pills; and that such a thing should ever occur in a civilized land would be a matter of astonishment to any but the physician, who sees so much misery and crime. Cannot this matter be remedied, and will not our brother editors aid us in the effort to awaken public sentiment in this direction?

DR. FLINT—Dear Sir: I see by the two last numbers of the Buffalo Medical Journal that you have undertaken to correct and change the public mind, and so do away with a great moral evil (criminal abortions.) I am glad, for, one that the medical faculty are getting aroused to this great subject, and that they may show its true character and influence, and correct, if possible, the error. It is a great evil, and there must be measures and means advanced to check it, or where will it end?

I will give you the history of a case that occurred to me in my practice only a year ago.

Mrs. W., æt forty, widow woman, with three children, applied at my office for medical aid; said she had been unfortunate, and got caught in a bad scrape, and wished something to produce the desired effect. She was told that it was very dangerous to give such medicine, and that they were very uncertain in their effects, as

no specific medicine was known that would produce this effect without danger. She left the office, and nothing more was heard from her for about two weeks, when I was summoned to her house as soon as I could get there. It was some twelve hours before I arrived, and when I did, I learned a tale that makes my blood almost chill when I think of it. She had procured some drug, the character of which she refused to tell; had taken it and it had the desired effect, *i. e.*, to produce abortion. She told me that she was alone with her children, who were asleep. She took the medicine, and the child was born; that she knew not what to do with it, and for fear that it would cry and awaken the other children she muffled its mouth, got off her bed, walked to the stove, in which there was a brisk fire, removed the griddle or cover, and placed the child upon the burning coals, and there it remained until it was burned to ashes. She said it writhed and tried to cry, and she had to turn away!

To what extent of crime will this debasing practice lead our mothers and our daughters if not stopped? The fœtus was a seven and a half month. The effect of the medicine which she took produced her death some hours after. This was her confession.

I could relate other instances that have occurred in my neighborhood, but they are no more than have occurred to you and to every other medical man.

I will state what I know of some of the "*Royal French Physicians*" who advertise in almost every paper that we pick up, a specific remedy for suppression of the menses, &c. You doubtless have seen an advertisement of Dr. Charles S. Gourander, French Physician, Surgeon and Accoucher, of the celebrated school of Paris, &c. Also, J. B. Bartonie, with an advertisement of like character.

These two eminent physicians are only one person assuming these two names. I am personally acquainted with this eminent humbug and do know that he never read a medical book in his life, never attended a medical school, never heard a medical lecture, and yet he advertised as being a graduate of the Royal College of Paris, (what students she must turn out.) I have seen this man go to the post-office and get from three to fifteen letters at a time directed to him at N. Y., and forwarded to R., and from each of these letters he received one dollar with directions to forward to such and such places his pills with full directions for use.

The most of these letters were from unmarried ladies—at least they were signed Miss So and So. These letters I have both seen and read. The pills he used were Wright's Indian Vegetable. He bought them by the gross, tore off the wrappers and put on his, and forwarded them to different parts of the United States, with directions for use. This will show the imposition practiced upon the people; but I think that his pills may be safer and less hazardous to life than the most of preparations used for this purpose, and by just such quacks as he.

Yours, &c.,

G. H. C.

[*Buffalo Med. Jour.*

Paralysie Generale. By M. H. RANNEY, M.D., Resident Physician of the New York City Lunatic Asylum.

This disease has been but recently discriminated from other forms of paralysis. The attention of the medical profession was first called to it by Esquirol, within the present century. It may have been confounded, perhaps, with the results of apoplexy, ramollissement, tumors, tubercles, &c., of the brain. It is a singular fact, however, that its frequency has greatly increased during the last sixteen years, as will be seen by reference to the various annual reports of the Superintendents of American Hospitals for the insane. In the report of the McLane Asylum, for the year 1844, Dr. Bell remarks, "I have regarded it as a somewhat curious fact, that it is only within the last three years that this disease has been admitted to this institution. As late as my visit to Europe in 1840, it was unknown within our walls; nor, after seeing it so often manifested there, can I recall any case in our register which would at all meet its characteristics, rendering it certain that it was not overlooked. Since that period, however, we have abundant evidence that it is not a form of disease peculiar to other countries."

The recent investigations by Calmeil, Foville, Rodrigues, Falret, and others have thrown much light on its nature and character. The name adopted by Esquirol does not give a correct idea of the disease. There is not usually complete paralysis, but the power of volition is partially lost, so that muscular action is imperfect and unsteady.

The characteristics of this disease are found in the paralysis, and in peculiar mental aberrations. Either the physical or the mental affection may be antecedent in its manifestation.

The first paralytic symptom is an affection of the muscles of the pharynx and larynx, which changes much the tone of voice and produces a difficulty in articulation. There is a peculiar "cracked" husky tone, and a hesitancy between syllables and words like stammering. A slight excitement produces a spasmodic action of the muscles of the face, particularly about the corner of the mouth and eyes. The tongue when protruded is tremulous, and thrown forward by successive efforts resembling the spasmodic action observed in chorea. The face becomes expressionless; as the disease progresses all of these signs become more marked, and a difficulty occurs in locomotion. The patient totters in his gait, and if he attempt to change suddenly his direction, is likely to fall. In falling he makes no apparent effort to recover himself, and his head strikes with equal force as other parts of his body. Deglutition is gradually impeded, and eventually there is a loss of control over the sphincters. In most cases epileptiform convulsions follow at intervals, varying from one week to three months, each of which seem to lessen the vital power of the system, and to increase, temporarily at least, the extent and degree of the paralysis.

The mental changes are marked both in the susceptibility and intellect. The patient is restless constantly moving from place to

place, peevish, fretful, and impatient of contradiction. He is ever discontented with his present condition, although the past and future afford unalloyed happiness. Opposition to his wishes is soon forgotten. Recent events are generally but feebly retained, whilst the past affords to his mind images of unparalleled success, and the future glows with day dreams of great achievements to be performed, or noble actions done. The disease may assume the form of mania, monomania, or dementia. The most prominent and usual characteristic is generally exaltation of the imagination. The belief is permanent, that he excels in everything, and possesses strength, wealth, influence, and intellectual capacity far beyond that of any human being. They who were previously endowed with a brilliant imagination, and had received high mental culture, present visionary schemes of the most attractive character. Their language is well chosen, and their style highly poetical. They project ships on an immense scale, and palaces of pure gold, control kingdoms, and discover the secrets of Providence. Great subjects alone occupy their attention. The following extract, from the register of the New York City Lunatic Asylum, illustrates this phase of the disease. The imagery of the delusions is entirely that of the patient, and his style and language is retained as far as practicable.

"H. H., born in Virginia, aged 32, admitted 1853. After receiving his degree at Yale, he was supplied with an abundance of money, and unrestrained in the gratification of every desire. His funds becoming exhausted, he endeavored to obtain a living by his own exertions, but with indifferent success, on account of the impairment of his mind and health through the influence of his former habits. His system is very feeble, and a large ulcer upon one of his limbs renders him almost helpless.

"The imagination of H. H., naturally active, is morbidly exalted. He believes himself to be the 'Earl of Warwick, the King-Maker,' and adds to the singularity of the delusion, by the conception that he is fourteen feet high, and large in proportion. He wishes to purchase the asylum and all its contents, proposes to bestow the most magnificent presents and the most extensive estates upon the physicians, and signs papers to that effect. Nothing is beyond his reach by reason of its expensiveness; nothing too good for his friends. His clothes are of the finest cloth, lined with the most costly satin, decked with intricate embroidery, and ornamented with buttons of enormous diamonds. For him magnificent pictures adorn the walls of mansions, which the highest architectural skill has reared. The souls of Praxitiles and Canova shine through the marble monuments of their art which fill the corners of his libraries. Through the stained-glass window, shaded by the heavy folds of Genoa velvet, the light falls upon the most rare editions of the works of those men, whose literature is eternal.

"Carpets, the delicacy of whose tints rival those of the summer cloud at sunset, cover the floors of his apartments. Tables inlaid with precious stones, which cause the envy of the brightest stars of heaven, uphold wines sparkling upon the brim of golden goblets, as if anxious to kiss the lips of the drinker, and viands which have

been prepared with the consummate skill of the highest culinary art. Flowers of supernatural beauty, whose delicate perfume angles might use on their spotless garments, fill his conservatories.

“Among the spreading branches of the trees of his pleasant gardens birds of brilliant plumage and unrivalled song pour forth their sweet voices in harmony with murmurs of fountains, whose silver-edged bubbles ripple over pearls and garnets, and whose banks are clothed with the herbage and verdure of the tropics.”

Even they who previously possessed but little imaginative power evince now the most lively conceptions. Matters of common occurrence may occupy the attention, but are so vividly and fancifully described as to render it difficult to detect the real nucleus of fact. The exhilaration produced on certain individuals from stimulating drinks bears some resemblance to the expansive ideas in this form of paralysis. These delusions continue until the disease has progressed to a low state of dementia. There is an occasional exception to the general rule of exaltation. In such cases the mind seems depressed and enfeebled from the commencement of the attack, and the paralytic symptoms are very strongly marked.

The presentation of symptoms and the diagnosis being the principal object of this paper, I select a case from Esquirol, in which the prominent characteristics are given. “M. L. D., thirty-eight years of age, had participated in the last campaigns of the empire, and was elevated to the rank of colonel after the restoration; uniting to every physical and intellectual quality all the advantages of a lofty position in society, and a large fortune. He was of the opinion that he had experienced injustice on the part of the government. His self-love was deeply wounded, and after many days of insomnia he gave himself several thrusts with a knife in the region of the heart. He was promptly secured, and his services were but for a brief period discontinued. From this time he expressed with bitterness his dissatisfaction, but was in no respect less exact in fulfilling his duties as a commanding officer. Two years subsequently he has an attack of cerebral congestion, for which he is largely bled. Two days later he has a second attack, more severe than the first. He remains excited, talks much, is agitated, irritable, and exacting. He does not sleep, and after a third attack a true mania is developed. The delirium is generally attended with agitation and notions of grandeur and fortune. He commits a thousand extravagances, remains almost naked, talks incessantly, cries aloud, orders a thousand things at once, is impatient, and commits strange and imprudent acts, which compromise his life, though he entertains no idea of suicide.

“Several physicians are called in consultation, and the maniacal state of the patient cannot be denied. His age, however, and the brief duration of the disease, offer to the counsellors expectation of a cure. I affirm that the patient will never recover; 1st. because three severe attacks of cerebral congestion had preceded the maniacal state, and that, consequently, there was some degree of cerebral lesion; 2d, because, notwithstanding his excessive loquacity, certain

words are imperfectly pronounced, and because his gait, although lively and active, is uncertain. I added, that active medication would hasten the progress of the disease; that the country, exercise, a severe regimen, and the repeated application of leeches to prevent new congestions, appeared to me to be the only proper course. One of the consulting physicians did not concur with me in my unfavorable prognosis, and proposed certain tentative measures.

"After a month spent in fruitless attempts, we were obliged to renounce all hopes of cure. Paralysis had progressed and dementia was confirmed—the patient retaining incoherent notions of grandeur, which persisted for more than two years. He regarded himself as the possessor of several provinces and kingdoms; distributed palaces, and gave away millions, and commanded also an army of giants.

His cavalry was mounted upon horses of gigantic size; he possessed palaces of diamonds, and his stature was 20, 30, and 40 cubits in height. He talked both night and day, now in a low tone, now loudly. He also uttered loud cries. Beseet by hallucinations of hearing, he listened to the voices of imaginary beings, and replied to them, boasting of his person, disputing with and even abusing them. He recognized the members of his family, and addressed them with amiability and politeness; but after a brief interval, however, resumed his habits of constant conversation. He was sent to the country."

Paralyse Generale occurs more frequently among males than females; in fact among the latter it is of rare occurrence. No good reason has been assigned for this—the predisposing and exciting causes to which the disease is referred being found in operation in both sexes. At Charenton, of 619 insane (366 men and 253 women) there were 109 cases of general paralysis, (95 males and 14 females). Into the asylum at Halle, in the Tyrol, 257 men and 181 women were admitted, among whom were 28 cases of general paralysis, (22 men, 6 women). In the New York City Lunatic Asylum, of 5,092 (2,391 men, 2,701 women) under treatment within the last eleven years, 85 deaths have occurred (76 males, 9 females) from this disease. It is a disease of adult life, rarely occurring before the age of twenty-five. Those of a sanguine temperament are more liable to an attack, especially if of a full habit, with a tendency to apoplexy. It occurs, to a great extent, in the class called *good livers*, who remain up late at night, and indulge in suppers with a free use of wine, the mind at the same time being actively engaged. Venereal excesses, a free use of mercurials, syphilitic diseases, a hereditary taint of insanity, or scrofula—in a word, everything that tends greatly to deteriorate the blood, impair the constitution, or lessen the vital power of resistance, may act as a predisposing cause. The exciting cause is generally some sudden mental shock—a loss of friends or property, great anxiety in business matters, or it may be an indulgence in very great excesses.

There are various diseases with which it has been and may be confounded. "*Ramollissement du cerveau*" has some symptoms in common with it; but the continued pain in the head, occasionally

vomiting, rigidity of the flexor muscles of the limbs, and stupidity, instead of exaltation of intellect, seem sufficient to distinguish it from general paralysis. In the last-named disease there is also a softening of the brain, but it is the cortical portion that is particularly affected, and this gives rise, usually, during its progress from irritation to softening, to the peculiar mental symptoms that have already been described.

Cerebral hemorrhage is usually accompanied by paralysis of a hemiplegic character, and its sudden invasion with the ordinary apoplectic symptoms is a distinguishing feature in its diagnosis.

Inflammation of the brain or its membranes, as well as the affections of the spinal cord, might lead to error from superficial examination, but the rapid progress of the one and the paraplegic character of the other, without any peculiar mental aberration would indicate the nature of the disease. Delirium, arising from inflammation, differs essentially from delusions. There is generally a low condition of the system; the mind is not occupied with external objects, but seems to retire within itself, and in a half comatose state is manifested by incoherent mutterings, without ever exhibiting the reasoning power of insanity.

Paralysis caused by mercury, alcohol, or lead, may be distinguished by a careful study of the causes and symptoms, the muscles of the extremities being in these cases at first affected either with numbness, trembling, or a complete paralysis of the extensors.

Morbid growths of the brain, such as tumors, (malignant and non-malignant,) tubercles, &c., present many features in common with general paralysis. The character of the morbid growth can be inferred only from the particular diathesis, or by the external manifestations, the paralytic and mental conditions involved in them depending principally on compression and inflammation, with its sequences. The change occurring in the mental faculties is that of general enfeeblement, presenting eventually the ordinary characteristics of dementia. The last stage of general paralysis closely resembles this, and its discrimination requires a knowledge of the previous history and a careful analysis of the successive order of the paralytic symptoms.

The following is selected from the case book of the New York City Asylum, as an illustration of this error in diagnosis. It had been considered as the effect of a morbid growth in the brain, previous to admission. "C. L. S., æt. 36, by profession an actor, was on the 10th of December, 1856, admitted into the asylum. When admitted, he was found to be completely demented, paralyzed, unable to walk or stand, and with difficulty to swallow. He lingered nine days when the disease terminated in death.

"The following history of the case, communicated by his brother, together with the post-mortem appearances of the brain, indicate the form of the disease of which the patient died to have been *paralyse générale*. His brother states that he had always been a temperate man. Some two years since, in consequence of domestic and busi-

ness troubles, he passed through a period of great mental anxiety and excitement.

"A year ago last October, while in Philadelphia, he exhibited strong symptoms of insanity of a maniacal character, succeeded by a condition of prostration. Soon after recovery of physical health, a change in his character was noticed; he became irritable, impatient of contradiction; at times despondent, and then very sanguine of success in his profession and business. His time, following such recovery, up to April last, was spent in forming business plans and studying the important characters of Shakespeare, in the belief that he was to become a prominent actor, although his friends knew him to be incompetent in this respect from the great impairment his memory had lately suffered. When slightly excited, twitching of the corners of his mouth and tremors of the muscles of his face were noticed; his tongue was protruded with difficulty, and his voice altered and 'cracked' in its tone. All of these symptoms increased in intensity about the beginning of April last, when on the 8th of the month, he had a convulsion of an epileptiform character, as described by his brother, followed by prostration. From this he afterwards gradually improved until August last, when he had another severe convulsion, followed by loss of consciousness. For several hours previous to this last convulsion, it was noticed that his left arm had become paralyzed. He was then taken to a hospital, and for a short time improved so as to be able to walk about the ward, and regained considerable power in the use of his tongue and arm.

"During the four months he remained there, his brother states that he had several convulsive attacks similar to those already mentioned, followed each time by increasing helplessness and greater loss of mental power, until he became reduced to the condition in which he was brought to the Asylum. Autopsy fourteen hours after death: skull a quarter of an inch thick, and of a texture less dense than usual; dura mater and arachnoid closely adhered over summit of cerebrum; arachnoid thickened, and presenting an opaline appearance, with serum between it and pia mater; general appearance of brain, atrophied; the cortical structure somewhat softened and easily scraped with the knife or finger-nail from the white medullary substance; this latter was found to be hardened, of a firm texture, and glossy in appearance; the ventricles were largely distended, and contained $\frac{3}{4}$ iv. of clear serum; the floors of both lateral ones had a feeling of roughness to the touch; the foramen of Monro was large and patulous, easily admitting the end of the little finger; the middle or soft commissure was wasted to a thin ribbon of almost transparent membrane; the pons varolii and medulla oblongata were of less than usual size, and the pituitary gland shrunk, and the upper portion of its peduncle enlarged. The weight of the brain, drained of the serum in its ventricles, was two and a half pounds, which is some ten ounces less than the average given by Solly."

The most common pathological change in *paralysie générale* is a softening of the vesicular neurine of the brain, especially in the anterior portion of the parietal regions. Sometimes the tubular neurine is also involved. Various other changes are occasionally found, such as thickening of the membranes, effusion of serum, induration of the cerebral substances, &c., but with no particular uniformity; and these, in fact, are found in many of the chronic diseases of the brain. The length of time in which the disease has progressed, must necessarily vary the cadaveric phenomena, and if death occur very early, there may be no manifest softening; yet from this it does not follow that it has been in progress, that there is no organic detritus. Either a subjective cause like over excitement of the mind, or an objective one like intemperance, or moral and physical causes combined, may over stimulate the brain, and its continuance result in congestion, from which condition serum may be effused into the primitive cellules, causing irritation that may or may not end in softening. Why softening follows in this form of paralysis, but not in ordinary congestion, is not well settled. It may depend either upon some particular predisposition on the part of the patient, or upon some unknown peculiarity of the disease.

The prognosis is highly unfavorable. Roderigues mentions a few cases of recovery, but by most the disease is considered incurable. Death follows, generally, in from one to three years after the first symptoms appear, but life is occasionally prolonged beyond the last named period. If it occur early in the disease, the termination is usually by epileptiform convulsions; if at a late period, from general exhaustion, or disease of some important organ other than the brain.

The object of this communication being merely to call the attention of the profession to the general characteristics of this form of paralysis, I will not dwell upon the subject of treatment.

M. Roderigues recommends the adoption, at an early stage, of active measures, such as frequent venesection, &c. After the disease is somewhat advanced, he advises the occasional abstraction of blood, in connection with tonics, aromatics, and cold baths, while at a later period he recommends laxatives, and revulsives to the skin. The treatment of M. Roderigues has not been found successful when adopted by others, although he gives a very favorable account of its results.

The observance of general principles of treatment to meet the indication of the symptoms has seemed to be attended with as much benefit as the adoption of any other system. I have seen more temporary good effects follow the use of a seton, or the free application of Ung. Tart. Ant. to the back of the neck, than from anything else in the way of treatment. If at a very early stage the habitual excesses which had partially undermined the system were corrected, and a careful hygienic course pursued, some hopes might then be entertained of a gradual restoration.—*American Med. Monthly.*

Foundling Hospital in Moscow.

From a letter by Bayard Taylor, in the *Tribune*, we extract the following account of the Foundling Hospital in Moscow :

In Russia, the Foundling Hospital is characterized by some peculiar and very interesting features, which deserve to be generally known, as they are intimately connected with one of those tender moral questions our civilization is afraid to handle.

In every general view of Moscow, the eye is struck by an immense quadrangular building, or collection of buildings, on the northern bank of the Moskwa, directly east of the Kremlin. The white front towers high over all the neighboring part of the city, and quite eclipses, in its imposing appearance, every palace, church, military barracks or other public building whatever. It cannot be much less than a thousand feet in length, and at a venture, I should estimate its size at three times that of the Capitol at Washington. The governorship of this institution is only second in importance to that of the city itself, and is always conferred upon a nobleman of distinguished rank and attainments. The importance of the post may be estimated when I state that the annual expenses of the hospital amount to \$5,000,000. A portion of the government revenues are set aside for this purpose, in addition to which successive Tzars, as well as private individuals, have richly endowed it. The entire property devoted to the support, maintenance and education of foundlings in Russia is said to amount to the enormous sum of five hundred millions of dollars.

This stupendous institution was founded by Catharine II., immediately after her accession to the throne in 1762. Eight years afterward she established a branch at St. Petersburg, which has now outgrown the parent concern, and is conducted on a still more magnificent scale. The original design appears to have been to furnish an asylum for illegitimate children and destitute orphans. A lying-in hospital was connected with it, so that nothing might be left undone to suppress crime and misery in a humane and charitable way. The plan, however, was soon enlarged so as to embrace *all* children who might be offered, without question or stipulation—the parents naturally giving up their offspring to the service of the government which had reared them. Russia offers herself as midwife, wet nurse, mother and teacher to every new soul for whom there is no place among the homes of her people, and nobly and conscientiously does she discharge her self-imposed duty. She not only takes no life, (capital punishment, I believe, does not exist,) but she saves thousands annually. She, therefore, autocracy as she is, practically carries into effect one of the first articles of the ultra-socialistic code.

Through Col. Claxton's kindness, I obtained permission to visit the Foundling hospital. We were received by the superintendent, a lively, intelligent gentleman, with half a dozen orders at his buttonhole. Before conducting us through the building, he stated that we would see it to less advantage than usual, all the children being in the country for the summer, with the exception of those which

had been received during the last few weeks. There is a large village about thirty versts from Moscow, whose inhabitants devote themselves entirely to the bringing up of these foundlings. We first entered a wing of the building, appropriated to the orphan children of officers. There are 1,200 at present in the institution, but all of them, with the exception of the sucklings, were enjoying their summer holidays in the country. It was the hour for their midday nap, and in the large airy halls lay a hundred and fifty babes, each in its little white cot, covered with curtains of fine gauze. Only one whimpered a little; all the others slept quietly. The apartments were in the highest possible state of neatness, and the nurses, who stood silently, with hands folded on their breasts, bowing as we passed, were also remarkably neat in person.

These children enjoy some privileges over the foundlings and poorer orphans. The boys are taught some practical science or profession, and not unfrequently receive places as officers in the army. The girls receive an excellent education, including music and modern languages, and become teachers or governesses. As the larger children were all absent, I could form no idea of the manner of their instruction, except from an inspection of the school and class rooms, the appearance of which gave a good report. The Superintendents and Teachers are particularly required to watch the signs of any decided talent in the children, and where such appears to develop it in the proper direction. Thus, excellent musicians, actors, painters, engineers, and mechanics of various kinds have been produced, and the poor and nameless children of Russia have risen to wealth and distinction.

On our way to the hospital proper, we passed through the church, which was as cheerful and beautiful a place of devotion as I have seen since leaving the Parthenon. The walls are of scagliola, peach-blossom color, brightened, but not overloaded with golden ornaments. The dome well painted in fresco, rests on pillars of the same material, and the hall altar-screen, though gilded, is not glaring; nor are the Saints abnormal creatures, whose like is not to be found in heaven or on earth. The *prestol* or inmost shrine stands under a dome whose inner side contains a choral circle of lovely blonde-haired angels, floating in a blue, starry skie. All parts of the vast building are most substantially and carefully constructed. The walls are of brick or stone, the floors of marble or glazed tiles in the corridors, and the staircases of iron. The courts inclose garden-plats radiant with flowers. The arrangements for heating and ventilation are admirable. With such care, one would think that a naturally healthy child would be as sure to live as a sound egg to be hatched in the Egyptian ovens.

We passed through hall after hall filled with rows of little white cots, beside each of which stood a nurse, either watching her sleeping charge, or gently rocking it in her arms. Twelve hundred nurses and twelve hundred babies! This is homoculture on a large scale. Not all the plants would thrive; some helpless little ones would perhaps that day give up the unequal struggle, and before men and women are produced from the crop there sown, the number will be

diminished by one-third. The condition in which they arrive, often brought from a long distance in rough weather, accounts for the mortality. When we consider, however, that the deaths both in Moscow and St. Petersburg annually exceed the births, it is evident that the government takes better care of its children than do the parents themselves. Of the babies we saw, seven had been brought in on the day of our visit, up to the time of our arrival, and fourteen the previous day. The nurses were stout, healthy, ugly women, varying from twenty to forty years of age. They all wore the national costume—a dress bordered with scarlet, white apron, and a large fan-shaped head-dress of white and red. In every hall there was a lady-like, intelligent overseeress. In spite of the multitude of babies, there was very little noise, and the most nervous old bachelor might have gone the round without once having his teeth set on edge.

The superintendent then conducted us to the office or agency, on the lower story, where the children are received. The number of clerks and desks, and the library of records, showed the extent of the business done. I looked over a report of the operations of the institution from its foundation to the present time. The number of children confided to its care has increased from a few hundred in 1762 to 14,000 in 1857. Since the commencement of this year (Jan. 13, O. S.,) 6,032 have arrived. The entire number received in ninety-six years is 330,000, to which may be added 60,000 more, born in the lying-in hospital during the same period—making 390,000 in all. The Petersburg branch affords still larger returns, so that at present 30,000 children are annually given into the care of the government. A very large proportion of them are the offspring of poor married people, in all parts of the country. As the children may afterward be reclaimed, on certain conditions, and are in any case assured of as fortunate a lot, at least, as would have been theirs at home, the parents are the more easily led to take advantage of this charity. The child is taken without question, and therefore no reliable statistics of the public morality can be obtained from this source.

The office is kept open night and day, and no living child which is offered can be refused. The only question asked is, whether it has been baptized. If not, the ceremony is immediately performed in an adjoining room, by a priest connected with the institution, one of the oldest nurses generally acting as godmother. Its name and number are then entered in the official book; a card containing them and the date of its arrival is attached to its neck, and another given to the mother, so that it may afterward be identified and reclaimed. Very frequently the mother is allowed to become its nurse, in which case she receives pay like the other nurses. After six weeks or two months in the institution it is sent into the country, where it remains until old enough to receive instruction. The regular nurses are paid at the rate of about \$50 a year, in addition to their board and lodging. If the parents pay a sum equal to \$25 on

the deposition of the infant, they are entitled to have it brought up exclusively within the walls of the institution, where it is more carefully attended to than elsewhere. The payment of \$200 procures for it, if a boy, the rank of an officer. The parents are allowed to see their children at stated times, and many of them take advantage of this permission. The greater part, however, live in the provinces, and virtually give up their children to the State; though it is always possible, by consulting the hospital directory, to find where the latter are, and to recover them.

In the lying-in hospital all women are received who apply. They are allowed to enter one month before their confinement, and to remain afterward until their health is entirely restored. Those who wish to be unknown, are concealed by a curtain, which falls across the middle of the bed, so that their faces are never seen. Besides this, no one is allowed to enter the hospital, except the persons actually employed within it. The late Emperor, even, respected its privacy, and at once gave up his desire to enter, on the representations of the Governor. The arrangements are said to be so excellent, that not only poor married women, but many who are quite above the necessity of such a charity, take advantage of it. In this case, also, the number of children brought forth is no evidence as to the proportion of illegitimate births. It is not obligatory upon the mother to leave her child in the hospital; she may take it with her, if she chooses, but it will of course be received, if offered.

Besides the soldiers, common mechanics and factory girls, which the children of merely ordinary capacity become, the Government has, of late years, established many of them as farmers and colonists on the uncultivated crown lands. They are mated, married, and comfortably settled in villages, where in addition to their agricultural labors, they frequently take charge of a younger generation of foundlings. I have seen some of these villages, where the houses were all neat Swiss cottages, under the projecting eaves of which the families sat in the mild evening air, while groups of sprightly children, too nearly of an age to belong to the occupants, sported before them. The people looked happy and prosperous. If there is a patriotic peasantry on earth, they should certainly belong to it. They are, in the fullest sense of the term, children of their country.

The St. Petersburg Hospital, though in the heart of the city, covers, with its dependencies, twenty-eight acres of ground. Upwards of five hundred teachers are employed, many of them on very high salaries. The number of nurses, servants, and other persons employed in the establishment, amounts to upward of five thousand. The boys and girls, both here and in Moscow, are taught separately. The cost of their education, alone, is more than \$1,000,000 annually. In a word, Russia spends on her orphans and castaways as much as the entire revenues of Sweden, Norway and Greece.

Diphtheria : Discussion before the Medical Society of London. Oct. 18. Dr. Semple called the attention of the Society to a disease which was exciting very great interest at the present moment—namely, *Diphtheria*. He had been called down to Bagshot to see some cases of the affection in question, but he arrived about an hour after one of the patients had died ; he found that the last fatal case was the third in the same family, the ages of the patients being respectively eight, twelve and fifteen years. They died at intervals of about a week from each other ; and while the funeral service was being performed on one of the children, the death of the elder sister, aged fifteen years, occurred. Dr. Semple, however, repaired to the house of the patient, in company with Dr. Blount of Bagshot, and obtained permission to make a post-mortem examination of the body, although to a limited extent. It was to be regretted that very few examinations after death had been obtained in this disease, owing to the prejudices existing in the minds of relatives, especially in the rural districts. However, nearly the whole of the diseased parts were examined, consisting of the tonsils, a part of the tongue and of the pharynx, the epiglottis, the larynx, and the trachea. On the whole of these parts the pellicular membrane, which is the characteristic feature of true diphtheria, was developed. It was especially necessary to bear this character in mind, because he (Dr. Semple) had reason to believe that, at the present time, many affections of the throat were confounded together, under the name of diphtheria, which had very little relation to that disease—at least in the sense in which the term was used by Bretonneau, Trousseau, Guersent, and other French writers. It was especially necessary to exclude the scarlatinal sore throats from the category of diphtheria, because scarlatina has no real or necessary connection with the diphtheric epidemic. Other cases which were confounded with diphtheria were ulcerated sore throats of various kinds, cancerum oris, and even common tonsillitis. The true distinction existing between diphtheria and the malignant ulceration of the tonsils in scarlatina, was to be found in the circumstance that the pellicular exudation in diphtheria may be readily removed by the handle of the scalpel, leaving the mucous membrane below it, congested indeed, but smooth and entire ; whereas, in the malignant ulceration of scarlatina, the substance of the tonsils is actually eaten away and destroyed. The fatality of diphtheria was quite appalling. Dr. Blount had attended eight cases of the disease in the vicinity of Bagshot, and every one of them had been fatal. Both the commencement and the termination of the disease were marked by peculiarly treacherous and insidious characters : the symptoms, at first, are so slight, that they are hardly noticed by the patients or their relatives ; and when medical advice is at last sought for, the pellicular exudation has generally reached the air passages, when the hopes of recovery are almost extinguished. The termination of the disease is equally insidious, and is often quite unexpected ; for although many patients die with symptoms of well-marked asphyxia, yet others perish suddenly by syncope, while they appear to be going on favorably. Dr. Semple was remarkably struck

with the circumstance that the locality, where these fatal cases occurred, was not one where one might expect, *a priori*, a malignant and fatal form of disease to prevail; for the surrounding country was open and beautiful, the soil dry, and the patients by no means placed in unfavorable hygienic conditions; nor did it seem that the disease attacked ill-fed or puny children, for the girl whose body was examined, was a plump, well-formed person, moderately fat, and with good muscular development. The therapeutical management of this disease was a question of great importance; but, hitherto, all kinds of treatment had been attended with very unsatisfactory results; the best treatment was, unquestionably, the application of strong caustics to the throat, at the very earliest possible period; and the hydrochloric acid, used in a concentrated form, was perhaps the best. This appears to stop the progress of the false membrane into the air passages, and acts somewhat in the same manner as concentrated nitric acid in preventing the progress of phagedænic ulceration. When the false membrane has reached the trachea and bronchi, there is very little hope for the patient. The next question is whether, when this extension has taken place, the operation of tracheotomy—so much extolled and so extensively practised by the French physicians—ought to be resorted to. In the case of the girl at Bagshot, Dr. Semple was prepared to recommend the performance of the operation, if he found the patient alive, and if she were suffering from the symptoms of asphyxia; but the post-mortem examination proved that this proceeding must have been useless, for the false membrane was so extensively spread over all the air passages that it could not have been removed, and it had so little tenacity that it would have broken under the forceps used for extracting it. True diphtheria, therefore, was characterized by the presence of the false membrane at the back of the mouth, extending, in the fatal cases, into the air passages, and causing death by obstructing the respiration; and it differed, on the one hand, from those sthenic forms of throat disease which were accompanied by full pulse, and the other ordinary signs of acute inflammation; and, on the other hand, it differed from those low forms of throat-disease which arose from a depressed habit of body, from unclean and unhealthy habitations, and from the complication of scarlatina. The extensive prevalence of diphtheria, at the present day, demanded the attention of the Government; it was sweeping off great numbers of the rural population, both young children and persons verging on puberty; and, from the peculiarly insidious nature of the early symptoms, it was generally neglected until remedial means were of no avail.

Dr. Staveland King doubted the propriety of tracheotomy in this disease. He thought the patient would die of exhaustion under the knife. Many cases of so-called diphtheria were merely cases of common throat affection; such as, on the one hand, was low form of angina in scarlet fever, and, on the other, sthenic croupal inflammation. He related some cases of diphtheria, which had come under his observation, in which the early symptoms were very obscure. In his opinion the disease was to the respiratory membrane what thrush was to

the intestinal. He believed it had a confervoid origin, and that the effect of the poison, when absorbed, was, in its elimination, to set up a sthenic inflammation simulating croup. Hence his treatment, in the cases referred to, consisted in the employment of powerful counter-irritation, the application of a leech to each side of the trachea, chlorine washes, and the administration of port wine, quinine, and chlorate of potash.

Mr. Streeter thought the disease was essentially allied to croup, and advocated the use of emetics.—*Lancet*.

Medical Notes From the Continent.—Utrecht.

[Under the head of "Medical Notes from the Continent; or, Sketches of the Universities, Hospitals, Lunatic Asylums and Mineral Baths of Holland, Belgium, Germany and Austria," Dr. A. Mercer Adam has given, in late numbers of the *Edinburgh Medical Journal*, some interesting descriptions of the places and institutions alluded to. We copy in full his account of Utrecht, of its celebrated medical school, and of two distinguished Professors resident there.—Eds. *Boston Med. Journal*.]

Leaving behind the indescribable smells of Amsterdam, I steamed on again by rail, through flat watery meadows—studded with sleek kine, such as one sees in the pictures of Cuyp or Ruysdael, and fenced with broad ditches in lieu of hedges—and past pleasant Dutch homesteads, which are dotted over the landscape—until the train reached the fine old town of Utrecht.

As a school of medicine, Utrecht unquestionably stands highest among the Dutch Universities, and the celebrity of several of its living professors has attracted to it much of the attention of the scientific world. The names of Schroeder Van der Kolk, Donders, Harting and Mulder, are very familiar to every student of modern medicine, and the influence of their views has extended into all lands.

The University of Utrecht is a plain building, which was founded in 1636. It contains a fine hall, which, at the time of my visit, was in daily use for medical and other graduations. At one end of it is a high gallery, wherein musicians perform during the ceremonies of the graduations, which is gaily bedecked with flags, swords, spears and drums—trophies of the gallant part which was played by the alumni of this college, during the struggle for independence, at the time when Holland was separated from Belgium in 1830, when the students of Utrecht, and of the other Dutch universities, patriotically enrolled themselves in corps, and fought most valiantly for the defense of their country. Other banners, bearing the arms of Dutch cities, &c., adorn the walls; and high above them all flames the emblem of the University itself—a burning sun, with the motto, "Sol Justitiæ illustra nos." There are about 400 students, of whom

70 are medical. Each medical class costs about £2 10s. for the session, and the professors, in addition to these fees, receive about £250 each per annum from the Dutch government. In connection with the University, there is a very good anatomical museum, chiefly remarkable for possessing a large collection of well executed wax models. The physiological laboratory of Professor Donders is also in the University. It is fitted up with microscopes and other scientific apparatus; among these I observed the most interesting instrument called the ophthalmotrope of Ruete, which attracted much notice when it was exhibited last year at the Ophthalmic Congress at Bonn. It consists of a model of the eye, capable of moving exactly as the natural organ, and having delicately arranged silken cords attached to it behind, which acts as the muscles of the ball. By means of a graduated scale, and some highly ingenious mechanism, one can see at once, by the lengthening or shortening of each cord, what muscles act in producing every movement of the eye, and to what extent, comparatively, each of them operates in these processes. The saloons containing Professor Harting's admirable microscopical collection, immediately adjoin Donder's laboratory. In another part of the town, Mulder, the Professor of Chemistry, has a splendid laboratory, which was expressly built for him.

Few living physiologists have a wider spread reputation than Shroeder Van der Kolk, the Professor of Anatomy in Utrecht. Though now an elderly man, he still retains all the enthusiasm of youth for the prosecution of physiological science; and when he is talking of his experiments or speculations, he warms with the subject, his manner becomes very energetic, and his face brightens up into a pleasant smile. In appearance, he is a man of about 60 or 65 years—of middle size, with iron-gray hair, and a slight stoop, from long study and bending over microscopes. I spent a very pleasant forenoon with him, seeing all his pathological and physiological preparations, about which he discoursed to me most enthusiastically in German. He showed me some finely injected preparations, to illustrate his theory of the non-existence of veins and nerves in the centre of carcinomatous growths—the injection being seen to traverse only the arterial vessels in a section of such a tumor. The pain attending the disease is attributable, he thinks, to the cancer cells entering and destroying the substance of the nerves in the surrounding tissues. We talked a good deal of the celebrated discussion about cancer, which occurred two years ago in the *Academie de Medecine* of Paris, and he remarked that, whatever may be said to the contrary, the microscopical diagnosis of cancer is not to be sneered at as an impossibility. He thinks, however, that in making a histological diagnosis of carcinoma, we should look for the cancer cells in the tissues immediately adjoining as well as in the suspected growth itself. Of Professor Hughes Bennett's *Researches into Cancer*, he spoke in terms of unqualified commendation; and, in common with all the continental physicians with whom I have conversed, he entertains the highest admiration of the efforts which have been made by Dr. Bennett to establish in England an improved system of medicine—

founded on a scientific rational basis, and in which it is sought to reconcile correct diagnosis and successful treatment with the most advanced views of modern physiology and pathology. And all honor, say I, to such men as Van der Kolk, Donders, Kolliker, Virchow, Claud Bernard, Hughes, Bennett, and others, for the impetus they have given to the culture of rational medicine. Although we may be unable, as yet, to deduce from *all* their investigations, theories of disease or modes of treatment superior to those which we at present possess, still there cannot exist a doubt that, *eventually*, all scientific medicine must be established on a rational basis of improved systems of physiology and pathology. "Without a rational basis," says an eminent writer, "the physician is only a bungler; and without a thorough knowledge of the empirical part of science, he deprives himself of many useful weapons for combating disease."* The wise physician will always try to adopt for his practice, methods which are at once scientific and successful, basing all his treatment upon the sound foundation of rational medicine; he will ever eagerly hail all that is *true*, even though it may wear the dress of novelty, and may on that account be condemned by professional conservatism as unworthy of acceptance; but, at the same time he will never lose sight of the "good old paths," or forget that practical knowledge, which has been gained by the accumulated experience of the wise and good men of the past. And thus will the scientific physician try to combine, in his treatment, all that is trustworthy and valuable in rational medicine and in empiricism; while he who neglects to do so, reduces medicine to the level of a trade, and fails in discharging that duty, which Bacon has well observed "every man owes to his profession." For truly in the words of the German poet:—

"Das sind die Weissen
Die durch Irrthum zu Wahrheit reisen;
Die bei Irrthum verharren,
Das sind die Narren."†—*Ruckert*.

The influence which the nerves exercise on the inflammation process has long attracted the attention of physiologists. Some years ago Van der Kolk divided the nerves in the limb of a rabbit on one side, and afterward fractured the bones of this, and also those of the sound limb. He found that osseous union occurred normally at the site of the fracture in the sound limb, but that in the one whose nerves were divided, fungous degeneration of the bone occurred at the spot of the lesion. The preparations of this experiment he showed to me. Later researches have been directed to the same subject; and ever since Ludwig pointed out the influence which excitation of the nerves exercises upon glandular secretions,

* "Ohne rationelle Basis ist der Artzt ein Pfüscher. Aber ohne durchgrieffte Kenntneiss des empirischen Theils der Wissenschaft beraubt er sich selbstanher nützlichen Waffe gegen die Krankheit."—*Canstatt*.

† They are Wise, who travel through Error to Truth—but they are Fools, who ever cling to Error.

physiologists have been trying to discover whether inflammatory exudations might not also be dependent upon the influence of the nerve fibres in other tissues. Thus Spiess (*Zur lehre de Entzündung*, 1854), conjectures that by the influence of the nerves in the walls of the blood vessels, the exudation of serum is occasioned in inflammation. And ever since Bernard made the important discovery, that division of the sympathetic nerve in the neck is followed by paralysis of the vessels of the head, numerous investigators, such as Brown-Saquad, Budge, Donders, Kussmaul, &c., have been engaged in ascertaining the influence which the nerves exercise over the circulation. Some very important experiments, to determine the influence of the nerves on inflammation, have recently been made in Utrecht, by Dr. Snellen, the assistant of Prof. Donders, who informed me of all his results, some of which I may mention. After numerous carefully performed experiments on the ears and limbs of rabbits, he found that irritation of the sensory nerves of a part is followed by increased reflex action of the nerves supplying the vessels of that region, occasioning spastic contractions of the walls of the vessels. This condition of spastic contraction is afterward succeeded by one of dilatation, caused by paralysis of the walls of the vessels. He looks upon the nerves supplying the vessels as only governing the contractions of their walls, and as only influencing the processes of absorption and exudation, by diminishing or enlarging the calibre of the tubes. He found that division of the sensory nerves of a part did not perceptibly influence the course of an inflammatory process established there artificially; but that division of the fibres of the vaso-motory or sympathetic nerves of the part, although it did not materially alter the course of the inflammation, greatly promoted the absorption of exudation, and consequently shortened its duration. He looks upon this increased facility of absorption as owing to the expansion and consequent thinning of the walls of the vessels, occurring during the state of congestion which follows the paralysis of the walls, consequent on the division of the nerves. Another important result of Dr. Snellen's researches, is more accurate information as to the influence of the trigeminus nerve on the eye. It is well known, that when this nerve is diseased, or artificially divided, we have opacity of the cornea, which in most cases goes on to keratitis, with perforations or atrophy of the eye. Valentin, Longet, Budge, Schiff, Graefe, and others, have experimented concerning this, and they have all been of opinion that the inflammation was due to the trophic influence of the Gasserian ganglion; while Axmann has pointed to this condition as a proof of the truth of his theory, that the nourishment of the tissues is dependent on the ganglio-spinal nerves. But Snellen has successfully demonstrated, that if the eye, deprived of feeling by section of the trigeminus, be very carefully preserved from all *external* sources of irritation which might excite inflammation no keratitis will occur; hence he argues, that the keratitis following section of this nerve is always traumatic, and dependent on inflam-

mation excited by external injuries received by the insensible cornea, rather than on any trophic influence of the Gasserian ganglion.

I have already alluded to Schroeder Van der Kolk's new views concerning the pathology of epilepsy. He considers that epileptics are divisible into two classes, viz. (a) those who bite the tongue during the attack, and (b) those who seldom or never do this. Now he has found that, in the first class, the capillary vessels of the corpus olivarium are widened in the course of the hypoglossal nerve; and that, in the second, they are enlarged in the track of the vagus, which may account for more labored respiration in those who do not bite the tongue. The walls of the enlarged vessels become thickened, exudation occurs, together with softening of the substance of the olivary body, so that he regards epilepsy as a reflex action from the ganglionic cells of the medulla oblongata. To illustrate this, I give the measurements of the capillaries which the Professor told me he had found in (A) those cases where the tongue is bitten, and in others (B) where this does not take place.

AVERAGE WIDTH OF CAPILLARIES.

	In track of Hypoglossus.	In Corpora Olivaria.	In Raphe.	In Vagus Track.
A.—In tongue biters...	0.306 m.m.	0.315 m.m.	0.355 m.m.	0.237 m.m.
B.—In non-biters.....	0.210 "	0.217 "	0.300 "	0.348 "
Difference	∓0.096 A.	∓0.098 A.	∓0.055 A.	∓0.111 B.

Such are Professor Van der Kolk's views of the pathology of epilepsy; but he does not offer them dogmatically, and himself admits that the question needs much patient inquiry to enable us to decide with certainty on the point. Meanwhile let me take this opportunity of directing the attention of English physicians to the subject, in order that they may repeat the investigations of this eminent Dutch physiologist.

I have said that Van der Kolk, in his mellow age, has the pleasure of knowing that ere he dies his merits are acknowledged, and his fame European. It is Professor Donders, however, who is now the man of most hope and promise in Utrecht; and to whom, consequently, most of public attention is directed. Like Simpson, Scanzoni, and many other eminent men, he has earned a wide reputation while yet comparatively young; and his skill as an oculist attracts thousands of patients yearly to Utrecht, to be under his care. Professor Donders is about 40 years old—rather tall, well built, and of very dark complexion; he has a quick piercing black eye, which seems at once to get at the root of a matter, and he has a frank manner, and a winning smile, which irresistibly inspire complete confidence in his skill. He has given an immense stimulus to physi-

ology, by his unwearied labors ; and his great enthusiasm, and his invariable courtesy, have rendered him a great favorite with the Utrecht students. The medical literature of Holland is under deep obligations to him ; for he was not only one of the principal supports of the *Nederlandisch Lancet*, during the existence of that periodical, but, since its decease, he and an Amsterdam physician have commenced a new medical periodical, in which henceforth the contributions of the Dutch medical men will be published in German instead of Dutch, as being a more generally understood language. I subjoin its title in a foot-note, for the benefit of those who may feel interested in the matter.*

I remained in Utrecht for some time, to see as much as possible of Donder's practice in diseases of the eye ; and I was shown every kindness by him, being taken to see operations, &c., among his private patients, and being admitted at all times to his ophthalmic hospital. I have never seen a better operator than Donders in cases of cataract and artificial pupil, and his diagnosis in eye affections is peculiarly rapid and correct. In most cases of interest, as in glaucoma, &c., he uses Helmholtz's eye speculum in making a diagnosis.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

Diseases of the Urinary Organs. A Compendium of their Diagnosis, Pathology, and Treatment. By WILLIAM WALLACE MORLAND, M.D., Fellow of the Massachusetts Medical Society, Member of the Boston Society for Medical Improvement, etc., etc. With Illustrations. Philadelphia : Blanchard & Lea, 1858. (For sale by Riley & Co.)

The volume before us is mainly composed of the substance of two Essays delivered by the Author before the Boylston Medical Society, and to which prizes were awarded. The questions proposed were such as to render it necessary to examine the entire subject of Urinary Pathology ; and hence the Author thought that with a little more labor he could get up a Hand-book for that part of the profession whose leisure will not allow them an extended examination of authors.

The Contents embrace *Two Parts, and an Appendix :*

Part I. DIAGNOSIS. General Considerations. Affections of the Supra-Renal Capsules ; Diseases of the Kidneys ; Diseases of the Uretus ; Diseases of the Bladder ; Diseases of the Urethra.

* Archiv. für die Hollandischen Beiträge zur Natur und Heilkunde, hereausgegeben von Donders in Utrecht und Berlin im Amsterdam.

Part II. PATHOLOGY AND TREATMENT. General Considerations. Affections of the Supra-Renal Capsules ; Diseases of the Kidneys ; Diseases of the Uretus ; Diseases of the Bladder ; Diseases of the Urethra.

The chapter on the Supra-Renal Capsules, their diseases, etc., will convey to the reader a very good idea of the value of the work.

So little has been known of the physiology of these organs, that their diseases have hitherto received but little attention, and it is only of late that any symptoms have been referred to them. For a long time they have been regarded as being in some way concerned in foetal life ; for at the second month of embryonic existence they are larger and heavier than the kidneys. We are not certain, however, that their early foetal development is evidence that they have any particular function adapted to this period. The small bones of the ear are perfect, or nearly so, at birth, the only portion of the osseous tissues that is in this condition. The relation, however, between this circumstance and the physiology of foetal existence, is not very apparent.

In the adult the supra-renal capsules are found to be small, yellowish flattened bodies, surmounting the kidneys, and inclining inwards towards the vertebral column. They differ in form, the *right* being three cornered in shape—the left semi-lunar. The right adheres to the under surface of the liver—the left touches the pancreas. Both of them are in close relation to the under surface of the diaphragm opposite the tenth dorsal vertebra. Kolliger thinks they are nearly related to the blood-vascular glands in structure. They are very numerously supplied with blood-vessels, not less than twenty small arteries entering their substance.

It is supposed that the supra-renal capsules are wholly independent of the kidneys, as is proved by the fact that they are found when these latter organs are absent. Rokatansky has observed a congenital union, one tunic investing both the kidneys and capsule.

We extract the following from the work on the *Special Lesions* of the Supra-Renal Capsules :

“III. SPECIAL LESIONS OF THE SUPRA-RENAL CAPSULES.

“Hæmorrhage into the substance of these bodies is not uncommon ; as might be inferred from the great vascularity of their medullary portion. The extravasated blood distends the capsule more or less, and is changed in its composition according to the

lapse of time since its effusion. The cortical substance is found pale and atrophied, and finally becomes of fibrous consistence. Suppuration and induration, as results of inflammation, are observed. Andral found the capsules changed into 'purulent pouches' in the new-born child and in the foetus. Adhesion to the kidneys is a frequent result from inflammatory action in the contiguous surfaces.

"Tubercular and cancerous degeneration are often found in the supra-renal bodies; cancer being more often secondary than tubercle. The lymphatic glands are commonly affected in these cases. Baillie pronounced them to be subject to tuberculous enlargement (scrofulous?) Tubercle, when found, is usually in large masses; it sometimes melts down into pus, and is found inclosed in a callous sac, or is changed into a chalky substance, surrounded by a fibroid tissue in which no trace of the healthy structure of the organ remains.

"A case of intra-cerebral tumour is reported by Dr. E. R. Peaslee, in the *New York Medical Times*, March, 1856; in which both supra-renal capsules were thickened, hardened and enlarged, with tuberculous deposits; the kidneys both healthy. The patient was a coloured person, so that the bronzing of the skin now attracting so much attention, as a presumed sign of renal capsular disease, could not be remarked. The fact of coexistent cerebral disorder may be noticed in view of the prevalent idea of the physiological connection of the supra-renal bodies with the nervous system. Cancerous disease of the organs would in this case have been more naturally expected.

"Medullary carcinoma is the most usual form of cancer observed in the renal capsules, and the organs are greatly enlarged by the diseased deposit. By extension, or simultaneously, the neighbouring glands, and the kidneys, are affected. Hæmorrhage is prone to occur in the cancerous mass, and the latter breaks down into a 'chocolate-coloured pulp.'

"Encysted disease and ossification have been observed in the supra-renal capsules. There are specimens illustrative of these forms of alteration in the Cabinet of the Boston Society, already referred to:—No. 595 shows ossification, which is referred to previous tubercular diseases; specimens of this combination having been exhibited to the society. In the instance last referred to, the lungs and bronchial glands are noted as "perfectly healthy." (*Catalogue*.) Specimen 596 is 'a large encysted tumor of the left

renal capsule;' the patient 40 years old, and died of erysipelas after the removal of a cancerous breast. A tumour in the left hypochondrium was noticed by her ten months before death; this was always painless; no special symptoms are mentioned; no discolouration of the skin (bronzing) is recorded. On dissection, the tumour was found closely adherent to the left kidney, which was healthy. The cyst was round; of the size of the two fists; of a dense, white, fibro-cellular structure. Within its cavity was "a soft, curdy substance, of a dirty grayish or brownish colour; also about ten ounces of watery fluid." The inner surface of the sac was smooth and regular for the most part, but now and then yellowish and coriaceous, with a few patches of white chalky deposit. The left extremity of the pancreas and a portion of the colon adhered to the tumour. No malignant disease in any of the organs.

"IV. BRONZING OF THE SKIN AS INDICATIVE OF DISEASE OF THE SUPRA-RENAL CAPSULES.

"A new importance invests these organs, in consequence of the late elaborate researches of Dr. Thomas Addison, of London. In a beautifully illustrated quarto of forty-three pages, he gives the results of his hospital observation. To the eleven cases collected by him, Mr. Jonathan Hutchinson has added others from various authorities, purporting to illustrate the views of Addison. According to the latter observer, the chief diagnostic mark of disease in the supra-renal capsules is "a peculiar browning or bronzing of the skin." This, it seems, may be present, whatever be the diseased condition of the capsules—as cancer, tubercle, or abscess—so that, as yet, we have only a *general* pathological clue, the new conditions being accepted.

"A gradually increasing debility accompanies the colouration of the skin. There seems no obvious cause for this; and there is not that amount of emaciation which attaches to affections particularly characterized by debility. Death, it is said, is the almost invariable result in these cases; and it supervenes rapidly, as a general thing. In default of that degree of emaciation usually observed in tubercular and cancerous degeneration, we should be unlikely to suspect either, especially when there are no manifestations elsewhere of such disease. Although an evident cachexia exists, the symptoms are not sufficiently distinctive to enable us to pronounce upon the exis-

tence of either affection in the supra-renal bodies. The number of cases hitherto noted, although comparatively small, is yet too considerable not to be admitted as justifying, to a great extent, the conclusion that disease of the supra-renal capsules exists whenever the true 'bronzed skin' is observed. If succeeding reports continue fully to confirm the deductions derived from the original ones, we may soon be in possession of a new pathological fact.

"The aspect and history of a patient with 'bronzed skin disease' may furnish more or less precise information respecting the character of the suspected lesion. If the scrofulous or tuberculous diathesis prevail, we may thus gain a hint; and the same is true of other constitutional peculiarities or affections, to which, perhaps, the patient is hereditarily predisposed. Ignorant as we still are of the precise physiology of these organs, and divided as are the opinions of anatomists upon their healthy structure, their pathological conditions must long remain imperfectly understood. An extended series of observations is requisite before fully reliable conclusions can be formed. Since Dr. Addison's researches, it is stated that during the past two years, out of five hundred necroscopic examinations made at Guy's Hospital, under the observation of Drs. Wilks and Habershon, only two cases have been met with where the renal capsules were found diseased, in which the diagnosis was not made out during life. One of these failures was in a patient who died of cancerous disease, and, in him, "a dingy hue" of the face was noted.

"It has been seen that Bergmann and Kolliker attribute to these organs a closer connection with the nervous system than Rokitansky and others allow. Mr. Hutchinson remarks, that the very liberal supply of nerves received by the supra renal organs leads to the conjecture that they are functionally very closely associated with the sympathetic system. The want of decided emaciation in the bronzed skin cases (there being rather a 'flabbiness' of tissue, but a 'bulkiness' of frame) hardly justifies a conclusion that they have any close relation with lesions of nutrition. Before any positive positions can be taken, many points remain to be determined. Amongst others, it should be ascertained how frequently the capsules are affected, without coexistent bronzing of the skin. Such cases have already been reported. In a case given by Dr. Bulkley (*N. Y. Med. Times and Gazette*, April 1856,) and which he now supposes similar to those related by Addison, the kidneys were

normal in structure, although only about one-half the usual size. No examination of the renal capsules was made; but it is reasonable to infer their freedom from disease, because, had it been at all marked, it would probably have arrested attention, during the inspection of the kidneys. A more positive case is that recorded by Dr. Peacock (*London Med. Times and Gazette*, January, 1856,) where bronzing of the skin, associated with great debility, was unaccompanied by any disease whatever, in either the supra-renal capsules or the kidneys. Softening of the *medulla oblongata*, and a calcerous deposit in its substance, sufficiently accounted for death.

“The *Association Medical Journal* for January 26, 1856, has an account of a case of bronzing of the skin over the whole body, excepting the palms of the hands: all the viscera were found healthy, save that the gall-bladder was greatly distended; with obliteration of the *ductus communis*, the hepatic duct being pervious. The reporter of the case refers to four instances of ‘bronze discolouration’ in very marked degree—the malady with which the patients suffered being styled ‘black jaundice.’

“As has been well remarked, some standard for the peculiar hue associated with renal capsular disease, must be adopted, or innumerable errors may be committed; various changes in the colour of the skin being confounded with the Addisonian bronze.

“That ‘peculiar, brownish, earthy hue so well known to characterize advanced cases of malarial cachexia,’ and the alteration produced by the internal use of the nitrate of silver, are mentioned as possibly likely to mislead. The change arising from the latter source is but infrequently noticed, and is hardly a bronzed, but rather a leaden colour.

“The following facts are presented by Mr. Hutchinson as derived from an analysis of his reported cases: Out of twenty-seven cases of ‘bronzing’ tabulated, both renal capsules were found destroyed by chronic disease in *twelve*; and in all these the peculiar colour of the skin was very marked, whilst the debility also existed, which is another characteristic of the affection. In seven cases where there was no *post-mortem* examination, presumptive evidence of the existence of lesion was very strong. In one patient (then living,) the symptoms corresponded so closely to those observed in the cases ratified by necroscopy, that it was considered an undoubted instance of irremediable renal capsule disease. In another patient, both capsules were found affected with recent suppuration, but only

‘a yellowish-brown’ tint was observed during life upon the skin; it was supposed that the disease had not lasted long enough to produce the deeper shade. In four cases of disease of one capsule, the bronzing, although decided, was much less marked than when both were affected; this fact is regarded as confirmatory of Dr. Addison’s opinions. The intensity of discolouration has thus far been found to be in proportion to the amount of structural injury, and to the length of time it has existed. Out of twenty-eight cases (one having been reported since the construction of the table,) twenty-five supply us with more or less positive evidence in favour of the new theory. In certain of the apparently ‘exceptional cases,’ an explanation of sufficient force may be offered. Thus, Mr. Hutchinson remarks that, in a case where recovery took place, the ‘dirty-brown tinge’ of the skin disappeared. He argues that here no true pigmentary change had been established; the disease might have been of hepatic origin; the discolouration came on suddenly, whereas it is usually gradual in its accession, often requiring several months for its full development. In another instance, a few nodules of cancerous degeneration were found in both the supra-renal capsules; there had been no discolouration of the skin. Possibly, the very partial invasion of the disease may account for the non-production of the morbid hue, it being remembered that the depth of the latter has hitherto borne a strict relation to the amount of structural injury.

“Case No. 21, from the table already referred to, is set down as perhaps more truly ‘exceptional’ than any. This is the one reported by Dr. Peacock. A girl of fourteen years complained of lassitude, and had slight cough; the complexion was ‘muddy,’ of a brownish hue, observed to be deepest on the face, arms, and shoulders; there was no ‘mottling’ of the skin, which, in the best marked cases, is very distinctive, the bronze patches having enabled Dr. Addison in one instance to predict speedy dissolution when no other alarming symptoms existed. A chalky concretion was found in the spinal marrow, and, as doubts were expressed during life as to this being an example of true bronzed skin, it is fair to consider this case as not proving anything, and it should be thrown out of the category. The supra-renal capsules were reported free from disease.

“Having thus assembled the testimony derived from this interesting series of cases, the following *rèsumè* of symptoms is subjoined,

as tending to throw light upon the pathological conditions. The change of colour of the skin is mainly a diagnostic element; it awakens our suspicions, and thus far, when decided, has been indisputable. This pigmentary change has its places of election, and its peculiar forms. Beginning upon the parts most exposed to sun and friction, in irregular patches, it extends, and is more marked in certain localities than in others. The neck, the backs of the hands, the front aspect of the thighs, and the arms, are most frequently affected. Wherever pigment is naturally abundant, the colour is most marked; thus, around the nipple it is deep, while the palms of the hands and the matrices of the nails are nearly or quite unaffected. This tendency is regarded as confirmatory of the idea that the change is really a deposit of pigment. (Hutchinson.) The continuance of the pearly-white of the conjunctiva is differentially diagnostic with a jaundiced condition.

“A very interesting case is reported in the *London Lancet* by R. H. Goolden, M. D., (September 12th, 1857,) where no bronzing of the skin was observed, yet extensive disease of the supra-renal capsules was discovered *post-mortem*. The patient was a surgeon, forty-six years of age, and formerly a pupil of Dr. Bright, who, with Dr. Rees, saw him in consultation during this, his last illness. The most marked symptoms were extreme anæmia and gradual loss of strength. ‘The right rectus muscle was firmly contracted, giving the alarm of mischief below, and in contrast with the left, which was soft and yielding.’

“Every organ was found healthy except the capsules. ‘The body was extraordinarily anæmic. * * * The right supra renal capsule presented the appearance of a large flaccid bag collapsed; the vein and the artery were seen entering the viscus. On opening it, there was presented a large cavity lined with chocolate-coloured, granular matter; no medullary substance, and the cuticle very thin and gray. The left capsule was smaller, containing two separate and distinct cavities, the upper of which presented the same appearance as that of the right capsule; the left contained some medullary substance, but neither of the cavities contained any fluid.’ Tonics, with a good diet and country air, benefited him most; and ‘he was always better after his meals.’

“In connection with the above report, it may here be remarked that *congenital absence* of the supra-renal bodies has been noted, as has been previously mentioned (page 136.) A case is reported in

the *Gazette des Hôpitaux*, from M. Antonine de Martini. There was fusion of the two kidneys also, and the renal body was found lying in front of the promontory of the sacrum. 'The patient's skin was white; he was forty years old, and died of chest-disease; he had strength enough to continue his labour as a cabinet maker, was married, and the father of three sons.' (*Boston Medical and Surgical Journal*, May 21, 1857.) This is only a negative fact, so far as non-bronzing of the skin goes, and is also very exceptional. Were there many instances, however, we suppose they would tend to disprove the assumption that the renal-capsules are 'pigment destroyers,' as advanced by M. Sèquard. The extirpation of the capsules, however, without results, as lately practised by M. Philippeaux, would, in a large aggregate of cases, be deemed of more weight in evidence.

As a converse case to that given in the first of the above paragraphs, we may add that Dr. Hodges showed the skin of an elderly man (a dissecting-room subject,) at the meeting of the Boston Society for Medical Improvement, December 14, 1857. There was very marked bronzing nearly all over the body, and the mottled form of it, as figured by Addison, was very distinct in the portion of integument exhibited.

"There was no perceptible disease of the supra-renal capsules, but they were much *smaller* than natural. No special history of the subject could be learned. The other organs were all healthy. The man was a pauper, seventy-five years old, had been esteemed insane, and died suddenly.

"At the meeting of the same society holden December 28th, Dr. Hodges exhibited the integument from the scrotum, portions of the peritoneum, and the supra-renal capsules, from another dissecting-room subject. The discolouration of the skin was similar to that of the specimen previously shown by Dr. H. as giving the idea of the *melasma Addisonii*. The change was most marked about the genitals. The subject, although considered an old man at the institution where he died, had no characteristics of old age save gray hair and baldness. His teeth were sound, his skin smooth, and his muscles well developed. Death was reported 'to have resulted from old age and debility.' No evident disease.

"On examination, the viscera were found sufficiently natural, and the supra-renal capsules healthy. The discolouration of the

serous surfaces, figured by Addison, was well shown upon the peritoneum; the mesentery, appendices, apiploicæ of the sigmoid flexure, and some parts of the peritoneum covering the anterior wall of the abdomen, being well sprinkled with the black specks not unlike 'fly-blows.' (*Boston Med. and Surg. Journal*, Feb. 4, 1858, p. 20).

"M. Brown-Séquard has lately made some important experiments relating to the physiology and pathology of the supra-renal capsules. He finds that when they are removed from a living animal, a remarkable change occurs in the blood, and death soon follows. To any objection that the experiment, by its seriousness, causes death, it may be replied that much more severe ones are performed upon animals by this distinguished physiologist with conservation of life; and that complete recovery occurs if experiments be not continued upon the same animals. The circulatory change referred to consists in *an accumulation of pigment in the blood*, and in the production of a peculiar form of crystals, not offering the chemical reactions of hæmatoidine. Dr. Sèquard advances the hypothesis that the function of the supra-renal capsules is to prevent the deposition of pigment in the blood. He believes that he has isolated a substance from the blood, which, were these organs absent or inefficient, would be converted into pigment. If very largely furnished, the organs, even if healthy, might not be able to destroy it all. He refers to the fact, revealed by the microscope, that the colouring matter in Addison's cases is identical with that beneath the skin of the African. The blood, too, in the 'bronzed skin' affection contains pigment-cells, pigment-granules, held in a peculiar substance, and the crystals already referred to. On these grounds, M. Sèquard thinks the supra-renal bodies may be considered *destroyers of pigment*. The crystals have been sometimes observed by him so large so as to obstruct certain of the smaller vessels, even becoming impacted in them. Thus the circulation would be seriously impeded, and that the nervous system would be gravely affected, is another of this observer's deductions.

"There are but few discolourations of the skin, arising from disease, with which the true bronzing could be confounded. The brownish hue caused by chronic jaundice is not likely to be mistaken for one which 'strikingly resembles the colour of a bronzed statue from which the gloss has been rubbed off.' Moreover, the *conjunctive* and *ungual matrices* would be coloured in the hepatic affection,

but clear in the bronzed skin cases; the discolouration in the former would be diffused; one of the chief characteristics of the latter is the *patched* and *mottled* form it assumes. Browning from the sun's rays is ineffectual upon parts protected by the clothing; the spots of *pityriasis versicolor* often have a great similarity to the bronzed skin; 'their limitation to the abdomen and chest, their defined outline, their furfuraceous surface, the slight itching which attends them, their contagious character, and, above all, the microscopic examination of the cuticle,' are sufficiently distinctive.

"The muddy hue caused by certain *cachexie* is more equally diffused than the bronzing, and it seldom closely enough assimilates the latter to deceive. Mr. Hutchinson, however, thinks it just possible that in two of the tabulated cases this error may have been committed.

"The excessive *debility* remarked is a very striking symptom. In connection with the nearly constant freedom from marked emaciation, it has a special value. There is an utter prostration of body and mind, and, often, death seems imminent from sheer exhaustion; there being no tendency to thoracic disease. This state of things is noticed, with, but one or two exceptions, in all the cases recorded. Although never extreme, there has been, in the majority of instances, loss of flesh; but there is a *flabbiness*, rather than an actual wasting. Anæmia is nearly always remarked. The pallor of the unbronzed portions of the skin is extreme; the muscles are soft; the conjunctivæ pearly; the blood, examined microscopically in two cases, was found 'loaded with white corpuscles.' To this impoverishment of the blood, the weakness, breathlessness on effort, and feeble action of the heart are doubtless correctly attributed; as also may be the irritability of the stomach. The *pulse* has been characterized by 'extreme softness and compressibility;' no increase of its frequency is noted. The *tongue* has not manifested other conditions than such as are usual in any illness where debility is the prominent symptom. Just before death, the stomach becomes very irritable; anorexia, nausea, vomiting, pain and sense of sinking at the epigastrium, are spoken of. The state commonly called 'bilious' has been noticed. Costiveness is the rule; few patients have had diarrhœa. The *urine* has not, thus far, been found abnormal in any important degree. Lumbar pain was occasionally noticed, but in two such instances there was coexistent disease of the vertebræ, to which it might very properly be referred; and no

reliable deduction can be drawn from its presence in the others. The cerebro-spinal functions were several times disturbed. Epileptiform convulsions in three persons; failure of memory, and remarkable change of temper, in one; and in another, numbness of the fingers, legs, and tip of the tongue, were some of the manifestations. One patient had tic douloureux. At the Brighton Hospital, a peculiar odour was exhaled from the body in two cases; in one, for some weeks, in the other for a few days only, before death. This has not been observed in other cases, and cannot be considered distinctive.

Death has occurred chiefly by exhaustion; sometimes a peculiar collapse has preceded, for a while, the fatal event, without any assignable cause. Once this phenomenon was so sudden and extreme, that poisoning was suspected.

“With reference to the theory of the disease, and implicating the function of the supra-renal bodies, Mr. Hutchinson remarked that, “supposing them to exercise a presiding influence over the functional efficiency of some of the viscera of the abdomen, it is easy to see how fatal lesions of health might ensue on their destruction. Dr. Gull has pointed out the close resemblance between the pineal gland and the supra-renal bodies, in minute anatomy, and also in liability to calcareous deposit; and the idea seems well to merit attention.” (*Loc. cit.*, March 22d, 1856.)

We may add, in concluding our notice of this work, that we are favorably impressed with it. It will prove to be of great service to those who have not access to a large library, where alone can be found what has been written on the diagnosis, pathology, and treatment of the Urinary organs

As any one who has given attention to it will see, the subject is a vast one. And there yet remains a great deal for future inquiry. Take, for example, Urinary deposits, and what do we know of their import? What is the import of oxalate of lime? of cystine? or, indeed, of uric acid? When these deposits are found, we, of course, have our theories in regard to their origin, but what do they amount to?

A Practical Treatise, on the causes, symptoms, and treatment of Spermatorrhæ, by M. LALLEMAND. Translated from the French, and edited by HENRY J. McDOUGALL. Third American edition: To which is added a work on the Vesicula Seminales, and their associated organs, by MARRIS WILSON.

The work of Lallemand has now been before the American profession so long that it is not necessary for us to call particular attention to its merits. Suffice it to say, that though perhaps imperfect, especially in regard to its practical features, it is yet the fullest embodiment of the facts connected with the subject of which it treats, in existence. Until recently, it has been the sole representative of the department to which it relates. We now have the little work of Wilson, of British origin, representing the same department. Blanchard & Lea have placed the American profession under new obligations by thus presenting them, in one volume, with all in British and French Medical literature, which is deemed of sufficient importance to assume a permanent form.

There are few subjects, it has seemed to us, the investigation of which is more perfectly environed with difficulties than this subject of Spermatorrhæ. In most minds, indeed, there is the greatest repugnance to the investigation. There is an unwillingness to concede the existence of the lower than brutish habits that constitute its most prolific source. Besides its imbruted victims are seldom disposed to admit their depravity. Then, again, it is not as easy as might be supposed to determine when involuntary seminal emissions are salutary, or when the result of disease. Being the result of disease, still many questions arise, in actual cases, as to the seat of disease—as to whether it is in the testes, vesiculæ seminales, prostate gland, or urethra. Or again, it being seated in one of these structures, is it in a sthenic or an asthenic state. A large number of equally difficult questions arise as to the therapeutical relations of the subject. The determination of all these questions is, in the nature of things, exceedingly difficult. Autopsical examination is rarely afforded, and would probably throw but little light upon the subject. Then, as to practical results, we are seldom applied to, till the patient is impelled to do so by conscious degradation, growing out of real or supposed loss of virile power; and even then he frequently comes because of the opportunity thus afforded him of indulging his melancholy reflections; and if, perchance he is ardently

desiring relief, so far as the moral man is concerned, to which, after all, we must largely address our means, he is so shattered, enfeebled, or paralysed, as not to admit of our hoping for his efficient co-operation.

To those of our readers who have experienced these embarrassments, we would recommend the book before us. We have not been able to verify the correctness of the practical precepts of Lallemand in regard to the curative effect of cauterization with the nitrate of silver. Possibly we have failed in our adaptation of the practice to individual cases, or for the want of very large experience and corresponding skill in making the application. We hope this is the secret of our trifling success. But we are compelled to say that, we think both Lallemand and Wilson have very greatly overestimated its curative power, as well as the proportion of cases in which it may be used without incidental injurious effects. H.

Lectures on the Principles and Practice of Medicine. Delivered at the King's College, London. By THOMAS WATSON, M.D., Fellow of the Royal College of Physicians: Late Physician to the Middlesex Hospital, and formerly fellow of St. John's College, Cambridge. A new American, from the last revised and enlarged English edition—With additions by D. FRANCIS CANDIE, M.D., etc. With one hundred and eighty-five Illustrations on Wood. Philadelphia: Blanchard and Lea. 1858. (For sale by Riley & Co.)

For some time the profession has been looking for a new edition of this work—and, sure enough, here it is. It seems that the "*Lectures*" have undergone a thorough revision at the hands of the Author, and whatever of value recent research has added to our stock of knowledge, in the various departments of medical science, has been carefully incorporated in them. The lectures on fever have been greatly enlarged and improved, and the distinctions insisted upon by pathologists between Typhus and Typhoid, are recognised as being founded in truth.

The extent of the present edition is indicated, not only by an enlargement of the page, but also by an increase of about 200 pages. This edition therefore contains 1,224 pages, put up by Blanchard & Lea in very handsome style.

The additions of the American Editor are inclosed in brackets.

This work has found its way to the libraries of a very large por-

tion of the profession. Dr. Watson seems to possess not only a comprehensive mind, but also powers of analysis that have enabled him to glean from medical literature whatever appeared to be of practical value to the student or physician. This, united with his own experience and a very felicitous manner of expression, has given his Lectures an uncommon degree of popularity. Now, while we cheerfully bear our testimony to the value of the work, we by no means wish to disparage the labors of others in the same line. We have had several works emanating from the American press, saying nothing about others of foreign origin, that are decidedly meritorious—of greater value, perhaps, on the diseases, and phases of disease peculiar to our own country, than the work of Watson; for, in order to describe a disease well, and give proper precepts of cure, it is simply necessary that the author should have lived where it prevails. No one can write sensibly on the Yellow fever, or Congestive Intermittents, without having not only witnessed them, but tried his hand upon them in practice. We think less, therefore, of Watson's work on our autumnal fevers than we do of indigenous publications on the same subject. The many elaborate monographs written by our own countrymen should take precedence when authorities are consulted for information. Of the febrile diseases of our continent—Drake, Eberle, Wood, La Raoche, Fenner, Cartwright, have painted likenesses, not from hearsay, but with the subject before them.

Dr. Watson, we observe, has changed his views in regard to the identity of *Typhus* and *Typhoid* fevers. The distinctions insisted upon by pathologists between typhus and typhoid, are now recognized by him as being founded in truth. He remarks: "In the affinity of these diseases is still implied the similarity of the two disorders. But Dr. Jenner has shown, by evidence which quite satisfies my mind, that they differ notably and constantly in their symptoms and cause, in their duration, in their comparative fatality, in the superficial workings which respectively belong to them, and which warrant our classing them among the exanthemata, in the internal organic changes with which they are severally attended, and (in what is the most important, the most conclusive, and the most difficult to determine of all) in their exciting causes."

Dr. Watson began his labors as a writer, with the impression that no definite line of distinction could be drawn between the different fevers met with in England. He believed that different epidemics presented very striking features of diversity, and even of contrast—so as to

suggest the frequent suspicion that the maladies composing them might be specifically distinct. Still, taking into account their strong general resemblance, finding that these like, yet varying forms, were often more or less intermixed—noticing also that other distempers fluctuated in type, that within the last twenty years, all acute disorders had assumed an altered and a more asthenic character, he conceived, and he taught that the differences in aspect and phenomena of continued fever depended more upon what is called the “*epidemic constitution*,” that is, upon an acquired disposition of the human body, produced by some general influence, and therefore affecting the entire community, than upon any essential difference in the nature of the disease itself, or in the virus from which it sprang.

These views, suggested in the former edition of his book, have been superseded by the lights from pathological anatomy, marks upon the surface, etc. This question, of no great practical importance, has been before the profession for some time, and may still be regarded as *sub judice*. The notion that Typhoid fever should be classed with eruptive disorders, as suggested by quite a number of pathologists, is founded on the circumstance, mostly, that the former disease, when complete in its phenomena, is characterized with *circular spots of a bright rose color*. These spots are also invoked for the purpose of making up a distinction between Typhus and Typhoid. Quite a number of writers, from Louis, with whom the suggestion originated, to Watson, insist in very persistent terms that the spots are peculiar to the disease. As a consequence, the attention of the profession has been given to the subject, and after years of observation, there is still a want of unanimity of opinion.

Dr. Stewart, of the Glasgow Fever Hospital, has bestowed quite an amount of attention to the question. He remarks, that the *eruption*; instead of consisting of successive crops of the spots, presents the two periods, longer or shorter, of increase and decline, and that in the more severe cases it may exhibit, during the period of increase, four different states, being *florid*, *red*, *livid*, and *petechial*. When the line of the eruption is florid, it disappears readily under pressure; when dark, it still disappears, but more slowly; when livid, or semi-petechial, it is only partially effaced; and when petechial, it is not in the least affected by pressure. Dr. Drake, some years ago, made a tour for observation to our northern chain of Lakes, and while at *Gros Isle*, he had an opportunity of examining, among the emigrants that had just a short time previously arrived, quite a number of cases

of *ship*, or Typhus fever. From his observations and the testimony of the resident physicians of the different hospitals, he felt himself warranted in the following remarks:—

“The skin shows various kinds of maculæ. In a few cases, genuine *rose*-colored spots show themselves, but very soon assume a darker color. In the majority, the spots are purple from their first appearance, and of every size, from ordinary petechia up to diffused ecchymosis, often bearing a close resemblance to post-mortem hyperemas. In some cases the spots are like wheals, and the seat of a sensation which leads the patient to scratch them, whereupon ulcers follow, which occasionally assume a sloughing character.” The Chairman of the Committee on Practical Medicine of the American Medical Association, states that during the prevalence of Typhus in the New York Hospital in the month of June, 1840, and at various times subsequent to that period, the eruption, (*rose*-colored spots) regarded as peculiar to typhoid, was frequently present in typhus, of the original nature of which there was not the least doubt, all of them having originated from the same source, namely, the fever poison generated in crowded immigrant ships.

Such is the testimony of Drs. Drake, Stewart, and the Chairman of the Committee of the American Medical Association, in regard to the question before us.

After witnessing a number of epidemics of what is usually called Typhoid fever, we have become impressed with the belief that these *rose*-colored spots import very little in the way of diagnosis—and still less favorably do we regard the fancy of those who, because of the presence of these spots, regard Typhoid fever as an *eruptive* disease.

Has any light been thrown on the diagnosis by *morbid anatomy*? Nothing is better established than that we may have both typhus and typhoid without any appreciable structural changes. Either disease, as far as human knowledge extends, is often purely idiopathic—dependent upon no organic alteration whatever. In the language of one of the ancient authors, either may “have its seat everywhere, or no where.” While then both diseases may be unattended with structural changes, it is equally true that both may be accompanied with various kinds of alterations, the bowels, without any doubt, being their most frequent seat. It may also be stated, that such conditions are much more common in what is now called *typhoid* than in what was formerly, and what is now, called typhus. The lesions of the *solitary* and *agminate* glands, however, which is

so often present in protracted cases in the former, are common to the latter when protracted, and occasionally present in other disorders.

Why should the *solitary* glands, and the *glandulæ agminatæ*, be more frequently affected in typhoid than in typhus? Is it not, however, true that continued fever from any cause is, when much protracted, liable to be complicated with ulceration of these glands.

The office of these glands is unknown. They are supposed (Carpenter) to be concerned in the elimination of effete matter from the blood, discharging it into the alimentary canal; and it is also supposed (Williams) that when the blood becomes poisoned, as in typhoid fever, it poisons these glands. If such notions be regarded as plausible, why may not the specific poison of other diseases operate in the same way?

The alterations of these glands are supposed to account for the diarrhœa of typhoid fever. Without any doubt, when present, they may give rise to more or less disturbance of the bowels. Their relation, however, to diarrhœa is not that of cause. Diarrhœa, there is every reason to believe, often exists without them, for we often have the complaint ushered in with diarrhœa: then again, very grave changes of structure may take place attended with but little, if any, discharge from the bowels.

Nor do, in our judgment, disease or ulceration of the solitary and agminate glands account for the hemorrhage from the bowels. Hemorrhages were formerly supposed, when from a mucous, serous, or cutaneous surface, to be due to a kind of *exhalation*. When from a mucous surface, it was supposed that the blood globules proceeded from mucous ducts, giving exit to serum, etc. The microscope has corrected our knowledge on this subject. The doctrine of a mere exhalation of the blood is untenable—that hemorrhage from a surface without rupture of blood vessels is impossible. The microscope, when applied to the tissue from which a hemorrhage proceeds, reveals a multitude of *distended and broken capillaries*. Now, what is the condition of the organism in typhoid fever when protracted? The soft tissues all lose their firmness—a want of tenacity is almost every where present—cohesion is lost—rupture of the capillaries is the consequence, and hence, hemorrhage. The hemorrhage then of typhoid fever is not, as suggested by the author before us, the result of ulceration of the *solitary* and agminate glands, but of an impairment of the forces of cohesion. Hemorrhages are, perhaps, more common in typhoid than typhus, because, under the

present "epidemic constitution" the duration of the former is greater than the latter—or, in other words, typhoid, as it occurs now, is more protracted than it was half a century ago.

In concluding our notice of the points relied upon by the author for making a distinction between typhus and typhoid, we may state that there is nothing new about them. They have been urged repeatedly in systematic treatises, monographs, etc., but to a large proportion of those who have had experience and good powers of observation, they have proved unsatisfactory—and, as a consequence, the question of identity may be regarded as being still open.

One thing is very certain, the importance of the question, practically, amounts to but very little. Both diseases are regarded as the result of a poison introduced into the system, the effects of which, in the general, are very much alike. The treatment, applicable to the one or the other, is not founded at all upon any hypothesis with respect to the nature of the poison, for this would be a battle in the dark, but is confined to the mere attempt to guard vital parts while the disease runs its course. Interference, with the view of breaking up the course of the disease, is now pretty generally regarded as improper, as likely not only to do no good, but mischief.

Treatment.—On the treatment, Dr. Watson remarks: "These remedies—cold to the shaven head—the local abstraction of blood wherever there happens to arise unequivocal evidence of local inflammation—an active purge at first and mild aperients afterwards, if the bowels are confined or sluggish—moderate astringents, if there be much or urgent diarrhœa, a few grains of Dover's powder, or of the extract of catechu; opium in a more efficient dose when the nervous symptoms are prominent, particularly sleepless delirium and restlessness; in certain cases, small and repeated doses of mercury; and in certain cases, *early* support by animal broths, and even by wine—these remedies, adapted to the particular circumstances of individual patients, form the staple of the treatment of continued fever according to my judgment and experience."

This treatment, it will be noticed, is exceedingly empirical—the palliation of symptoms as they arise. And yet, who is there that can suggest a better one?

While it must be conceded that the plan suggested by Dr. Watson for the treatment of typhoid fever is, in the present state of knowledge, the most available, no one can fail to recognise its weakness, and how imperfect and unsatisfactory must be the results. No

treatment for *typhoid* fever can approach rationality without being founded upon some correct view of the changes made upon the organism by the disease. The departures from the physiological condition of the solids and fluids must be appreciated. What is the nature of the poison? How does it affect the simple chemical elements entering into the composition of the body? How the *immediate* principles of which the tissues are composed? How the simple histological elements? How the functions of circulation, nutrition, secretion, innervation, respiration, etc.? When such questions are answered, we may begin to hope for an approach to a rational method of treatment.

A matter not always properly appreciated, is the circumstance that no two epidemics of the same disease are alike in mortality. Typhoid fever occasionally prevails, attended with but little mortality. The cases may seem to be grave, yet so decidedly is the tendency to spontaneous recovery that but few deaths occur. At other times, the tendencies are very different—one half of the whole number seized with the complaint, die. What now makes this difference? The superficial and self-sufficient observer would attribute it to the treatment. But this will not explain it, for it has often happened in the same individual's practice, where the treatment of both epidemics was in general the same. The explanation will be most likely found in the presence of some other disease, or predisposition to disease, operating concurrently with the epidemic.

When cholera was in the country we often had more or less of it complicating other disorders. It was not then uncommon to have some of its graver elements in connection with typhoid fever; and when such was the case, the mortality was generally very high. In this way we account for the difference in mortality of epidemics.

YELLOW FEVER.—The article on Yellow Fever is written by the American editor, Dr. Condie,—and when we take into consideration the fact, that Dr. C. nor no one else, not a resident of a locality where the disease is endemic, must necessarily possess very feeble powers of description, the digest he has given is very creditable.

We have no space for a further notice of this work. The author of a work on Practical Medicine assumes quite a responsibility—the direction of a profession in the cure of the diseases to which “flesh is heir.” Great good, or great evil, or both, may be the result. Respect for authority is a virtue—but it should not be forgotten, that those who write books on the subject before us, can never fur-

nish the programme for the treatment of a single case. Of the exact character of the case, and of the remedies applicable to it, the physician who has charge of it must be his own judge. But while this is the case, the young men will find in the work before us the counsels of wisdom, and the old men the words of comfort. Few men have succeeded so well as Dr. Watson in throwing together science and common sense in the treatment of disease.

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

Lecture of O. S. Fowler, of N. Y., the Phrenologist.

This gentleman has just closed a course of Lectures in our city on his speciality, *Phrenology*. We attended his first lecture by invitation, and it might not be out of place to say how we were impressed. We will say a few words on the *physique* of the lecturer, his *style* of speaking, *amount* of learning exhibited, character of *matter*, &c.

Mr. F. is of medium height, has a light frame, sharp features, a head with a very long antero-posterior and very short transverse diameter.

Mr. Fowler is the counterpart of a good speaker. His voice is small, at times aspirate, and is a very fine sample of monotone. Emphasis was generally misplaced; and cadence he seems never to have heard of, rushing up to the end of his sentences without the least variation of tone. From what we heard, we should not think Mr. F. a man of learning in his department. The references he made to physiology showed how little he knows of the science of which his speciality is alleged to be a part. He stated that, a man who had the art of breathing could cure himself of almost any disease, fever and ague included!

The *matter* of Mr. F.'s lecture was about what we have had in the books on the subject for years. He alluded to the labors of Gall and Spurzheim, but told of no experiments or observations of his own, to show that the brain has the plurality of function contended for by phrenologists, and that the location of each faculty can be pointed out on the exterior of the cranium. He considered the brain as the organ of thought, and its strength dependent upon the body—a strong brain in a strong body—a weak brain in a weak

body. He said the phrenologists discovered this connection. How is this? *Mens sana in corpore sano*, is as old as classical literature. But is this naked dogma true? Has the "Benecia Boy" more intellect than had Pope, who had such a poor physique that he was obliged to lie upon the sofa while composing the "*Essay on Man*?" or more than Locke, who was a miniature man, physically? If gigantic intellect and broad views are always necessarily connected with large bones, muscles, &c., how are we to account for the able productions that in all ages of the world have emanated from small men? Some body has suggested that there are big-headed races, big-headed families, big-headed individuals—meaning thereby, it may be supposed, that there are nations, families, and individuals that have a predominance in the development of the nervous system. The dogma, therefore, needs qualification. It should be stated on this wise: *Cæteris paribus*, the individual or the nation having the largest brain will have the largest capacity.

In regard to the plurality of organs or faculties — dissection teaches that the brain and spinal marrow are composed of two kinds of matter, *gray* vesicular, *white* fibrous. In the former the forces *originate*, whether connected with motion, sensation, or intellection; the latter is continuous with the nerves and serves the purpose, like the nerves, of conduction. In the spine, the *gray* matter is capable only of originating motor phenomena, in the sensorium at the base of the brain, sensory phenomena, and in the convolutions, intellectual phenomena. These convolutions surround the organ. They exist at the base of the skull and in the fissures as well as upon its upper lateral and posterior parts. If viewed with the naked eye, or with the microscope, or subjected to the crucible, they are alike every where. Why, then, not map out the base and the portions within the fissures and attribute to them certain faculties? Why suppose that those portions corresponding to the more exposed parts of the frontal, parietal, and occipital bones are alone endowed as organs. In the estimation of phrenologists, each one of the faculties depends upon a particular spot on the circumference of the brain, and in these spots the forces of the faculty, whether relating to the moral, animal, or intellectual nature, are elaborated. Now, how will this hold good with reference to other organs, the office of which is to elaborate or secrete different things. The kidneys secrete quite a number of substances. Is a certain part of the organ set apart for the secretion of urea, another for uric acid, another for

chloride of sodium, another for phosphate of soda, &c? What is the difference between a supposition of this character, and one that divides up the brain into individual sections? The cerebro spinal axis appears to be peculiarly endowed in different parts of it. The lower portion of it, the spinal marrow, has the kind of gray vesicular mater in it capable, merely, of originating *motion*; the base of the brain the kind that sustains *sensation*; while the gray matter in the convolutions upon the circumference of the cerebrum and cerebellum serves as the source of thought, emotion, passion, &c. Thus far there is *specialization* of function in the brain; and here the matter is susceptible of proof of a high order. But there is nothing, in the way of evidence, stronger than analogical reasoning that supports specialization of function any further.

SIMS' OPERATION IN CONNECTION WITH PREGNANCY.—We recently performed the operation for vesico-vaginal fistula under peculiar circumstances.

A lady and her husband had visited us in reference to an operation, and were to have been in the city, for that purpose, a couple of months subsequently. In the mean time, however, we received a note informing us that she had ceased to menstruate under circumstances giving rise to the apprehension of pregnancy. We advised delay to give opportunity for determining that matter; in the mean time, as the rent was large, and we had witnessed the most disastrous consequences from the supervention of labor at term, under similar circumstances, we were led seriously to consider whether it was not our duty to effect an abortion.

The necessity for direct procedure towards this end, was however, obviated, as the result of more mature reflection. We were led to hope that Sims' operation could be performed without its inducing an abortion, and that being successful, the cicatrix might reasonably be expected to attain so much firmness and strength during the balance of the term, as to make this portion of the walls as strong as any other; and that, the operation resulting in an abortion could only for the time, defeat the attempt at a cure of the fistula.

The pregnancy in the mean time, however, had reached the end of the third month. At this stage we proceeded to the operation

for the cure of the fistula, introducing seven silver sutures. Every incident of the case was very gratifying till near the end of the third day. At this juncture very active labor pains supervened, and within about two hours the foetus and secundines were expelled.

Examining our sutures the following day, we found the central ones torn out and the other parts of the pared margins separated more or less, so that we at once removed all the stitches and left the case for further operative procedures as soon as we might regard them admissible. H.

CACHEMIA.—The most striking specimen of this pathological lesion which our exchanges have contained in a long time, is in the December number of the Oglethorpe Medical Journal, published at Savannah, Georgia. Prof. Steele, one of the editors, was subjected to a newspaper attack from a competitor. It brought out a reply from him, which, with the brief report of a case of fever, fills 12 pages of his journal.

We have not the slightest disposition to enter into the pending controversy, in regard to the case, or to apologize for the attack, or even to maintain that being groundless and unrepented of by its author, it ought not to exclude him from the fellowship of the honorable of the profession. But as the article closes with a challenge for the criticism of the profession, we embrace the opportunity to express our regret at its spirit. Possibly, as Prof. S. characterizes him, his competitor is "contemptible," "dishonorable," "low and malicious," "one of his satanic majesty's pimps," "a public mendicant," &c, &c., &c. Let all this be true, however, to whatever extent, in the given case, it is still not the less unfortunate, that one whose position is so elevated as that of Dr. Steele, did not discard this public exhibition of unsavory epithets, and either treat this attack with silent contempt, or meet it coolly in the spirit of candor and fairness, and whatever of severity these might justify. Such a course, seems to us, to have been demanded; not only to silence his assailant, but as commending itself as worthy of the imitation of the large number of juniors, who are supposed to look to him as an exemplar. H.

*Prof. Loving's Introductory Address at the Opening of the Session
of Starling Medical College.*

This address, published by the Class, has been laid on our table. It is upon the *subject* of *Chloroform*.

We have no space for an analysis. But we may say that it commences with the history of anæsthetic agents, after which a very good summary of what is known of those most in use, is given. On the historical part of the subject the address is *multum in parvo*; and as it regards the use, abuse, and relative merits of the different articles before the profession, the views presented are sound and well expressed.

No article on its first introduction to public attention has created more sensation than *Chloroform*. Its range of application, important character of the indications sought to be fulfilled, and the contingencies connected with its use, have combined to enlist a great amount of interest from all classes of community.

NOTICE TO PHYSICIANS.—We occasionally send specimen numbers of the Journal to reputable physicians who are not subscribers. Where more than one number is retained, we shall take the liberty to continue to send, and forward bills as to regular subscribers.

H.

PROCEEDINGS OF THE OHIO STATE MEDICAL SOCIETY.—The printed proceedings of the last meeting of the Ohio State Medical Society are ready for distribution. Some of the longer papers not having been forwarded to the publishing committee, it is rather a slender document.

H.

Minutes of the Union Medical and Surgical Society of Alliance.

Special meeting convened at or near the hour appointed.

President, Dr. A. Brook in the Chair.

Secretary's report of previous meeting, read and accepted.

On motion, The order of business was suspended for the transaction of some of a miscellaneous character.

Dr. A. Borton of Plymouth, Ind., presented his credentials from the censors, recommending him as being qualified for membership; Dr. B. was unanimously elected as a member and received his certificate.

On motion, L. Collins, M.D., and W. M. Prentice, M.D., both of Ravenna, were elected members of the Society.

Dr. Alkorn was excused, on application, from delivering his address, on plea of ill health and want of time for preparation. Essayists not present. Appointments continued.

Dr. Thomas presented Dr. A. Belding's claim for an excuse, which was accepted and the Dr.'s appointment continued for the next meeting.

Dr. W. M. Prentice introduced the subject of typhoid fever for the consideration of the profession then present.

Dr. A. Brooke, of Marlboro, and Dr. L. Collins of Ravenna, were called upon to give their opinion as the oldest members present. Some interesting facts were elicited in regard to the epidemics occurring at different periods of time. Dr. Collins' dating as far back as 1826. Dr. Brook's experience proved that different sections of en required different methods of treatment. In the southern districts of this State opium had been *his* sheet anchor; in this section mercurials and quinine. Dr. Collins concurring in the application of this treatment to the epidemics spoken of.

Interesting remarks by other physicians present.

Query by Dr. Alkorn: Is it contagious? elicited some discussion but no general decision.

Dr. R. S. Thomas, of Alliance, reported a case of poisoning by strychnine occurring a few days previous, in which after violent tetanic spasms (the effect of V grain dose of strychnine, swallowed two hours before being called) he succeeded in relieving the patient by administration of large doses of sulphate of zinc, after free emesis giving tr. opii. Query—Will he experience more tetanic spasms as he has still—(after a lapse of five days) pain in his shoulders and spinal muscles? Opinions given in the negative.

Dr. R. S. Thomas, then presented the following resolutions which were adopted:

Resolved, That the reports of cases, essays, and all other papers, read before this Society, be left in the hands of the Secretary, as the property of the Association, with the consent of the authors.

WHEREAS. Publishers of Medical Journals request the profession to report to them for publication, matter of interest or novelty to the

medical world ; and, whereas, *this Society may*, have such matter, therefore,

Resolved, That a committee of three be appointed to select from the addresses, essays, cases, and other papers presented to this Society, such matters as in their judgment, would be of general professional interest, or instructive, and present to Medical Journals for publication.

Resolved, That this committee serve during the remainder of the present year, and that hereafter, such standing committee be appointed at each annual meeting.

The meeting then appointed Dr. W. M. Prentice, Dr. R. S. Thomas and Dr. A. Brook, said committee.

Dr. Alkorn was appointed to deliver his address at next meeting. On motion, adjourned.

DR. A. BROOKE, *President*.

ELIZAH L. S. THOMAS, M.D., *Secretary*.

Union Medical Society of Alliance, Ohio.

We have received a copy of the Constitution and By-Laws of this Society, organized June 26, 1858. The following are the officers for 1858-9.

President, Dr. A. Brooke ; Vice President, Dr. K. G. Thomas ; Secretary, Dr. Eliza L. S. Thomas ; Treasurer, Dr. J. Armstrong ; Censors, Drs. A. Belding, S. L. Brenton, J. H. Day.

We shall expect to hear of the successs of this Society, and shall be pleased to have some of its meritorious papers for insertion in the Journal.

If every county in our State had a Medical Society well sustained, we might with confidence look for increased learning in the profession, and a larger compass of respectability and usefulness. Association stimulates industry, harmonious action, and promotes good feeling.

SEPOMETER.—Among the many things which have troubled the minds of ordinary thinkers, has been the assertion of chemists, that the air had in all places the same composition. We cannot, therefore, be sufficiently thankful to Dr. R. A. Smith, of Manchester, for

his discovery of an instrument by means of which we can ascertain the *causes* of the different degrees of purity of air. As by means of this instrument the actual amount of putrescible matter in the air can be measured, Dr. Smith has given to it the name of *Sepometer*. The salt he uses, as a measurer of impurity, is almost the best oxydizing agent with which chemists are familiar; it is the permanganate of soda. The process consists simply in ascertaining how much of the permanganate is decomposed by a given amount of air. The indications are very beautiful, and exhibit the greatest difference between the air of towns, country, and sea. The use of blood by Dr. Smith is also novel. By means of the smallest quantity we can almost instantly ascertain the difference between town and sea air, by shaking it with a small portion of blood in a tube. We shall be most anxious to hear of experiments performed in the wards of our hospitals by the aid of the Sepometer, and with the breath of patients, as we believe that much valuable information will be thereby obtained.—*Med. Times and Gaz.*, July 24, 1858.

PRELIMINARY LITERARY EDUCATION AGAIN REQUIRED FROM MEDICAL STUDENTS IN FRANCE.—Our readers may recollect that in 1852 an imperial decree removed the obligation, formerly imposed on students, to produce the degree of Bachelor of Letters (tantamount to our B. A.) before commencing their medical studies. Proficiency in the sciences allied to medicine was alone required. It has, however, been found that the absence of a literary education had a very unfavorable effect upon the young men entering upon their medical studies. The Superior Council of Education was consulted on the subject, and the members were almost unanimous in the opinion that the former state of things should be re-established. The Minister of Public Instruction, M. Rouland, also approved of the change; and upon his report to the Emperor, the decree has just been issued requiring every student to be possessed of the degree of B. A. before registering at the faculty. The first year is devoted to the study of the allied sciences as far as they bear upon medicine; and a modified degree of Bachelor of Science is, after examination, conferred upon the student who has completed his first year. The *bona fide* medical studies then begin, the young men are examined at the end of each session, and the last examination takes place when the four years are completed.—*Lancet*, Oct. 16, 1858.

IMPORTANT TO DRUGGISTS AND OTHERS.—George W. Quinby vs. F. Eckstein, Jr. Judge Spencer delivered a lengthened charge to the Jury. Our space will admit only of an abstract:

The plaintiff sets forth that defendant is a druggist in the city Cincinnati, whose business it is to put up accurately prescriptions handed to him from time to time; that he held himself out to the world as skillful in the performance of that branch of business; that plaintiff, in the month of November, 1853, placed in the hands of an agent or clerk of the defendant a prescription written by Dr. Mighels, for the extract of dandelion, instead of which said agent put up an extract of belladonna; and that in consequence of this carelessness of the defendant, through the medium of his agent, the plaintiff suffered greatly in his person—became, in a word, poisoned—lost the use of his limbs and reason for a considerable space of time, was for many months deprived of the power of transacting his business, and put to considerable expense in procuring medical attendance—for all of which he claims damages in the sum of \$10,000. The defendant admits that his profession is that of a druggist, and that as such he puts up prescriptions, but in all other respects denies the averments of the petition.

It should be premised here, that the foundation of the action is the negligence of the defendant. The business of a druggist was one that required him to exercise extraordinary care and prudence, so far at least, as the public are concerned; and the reason for this is that in proportion as accidents may be fatal, or the community may be injured, more or less, by neglect or omissions, persons should be careful in avoiding those accidents. But all this is founded on the idea of negligence, for the law does not require that an apothecary shall insure that at all hazards a prescription is accurately put up.

It was claimed, on the part of plaintiff, that irrespective entirely of any care exercised by defendant, he was bound to put up the article required, and that if he failed to do so, the other party would be entitled to recover for any damage arising to himself from such a failure; and the case was put by counsel that, if a merchant was requested to put up a certain article of commerce, and put up anything else, he was bound to respond in damages. This may be true, but it does not follow he is responsible for all the consequences. No man would be safe if he was required at all hazards to guard against accidents. If a merchant dealing in flour, should sell a

article not manufactured by himself, that looked fair, yet happened to be mixed with poison, he would not be responsible for any accident growing out of the sale, where the transaction was one in which he was not at all negligent. The commodity not being as it was represented in the first instance, he would be bound to restore the price paid for it, but where he had exercised prudence and care in the selection of the article, he would not be responsible for accidental consequences.

The same rule applies to a physician or apothecary ; he is responsible only on the ground of negligence. It might be illustrated in this way : If this medicine had been in the first instance properly put up, and the plaintiff did not immediately take it with him, but left the store for a short time, (as was the case,) and then returned and took it away—some other article having been substituted in the meantime, by the intervention of an agent over whom the defendant had no control—or that the defendant not being the manufacturer of the article, obtained it as genuine, when in fact it turned out not to be so, but different from that which he supposed it was—in either of these cases he would not be responsible further than for the price paid for the medicine.

The Court here reviewed concisely the testimony applicable to these propositions.

The first inquiry which presented itself was whether the article that was put up was that which the prescription called for. If it was, there was an end of the action. Here the burden of proof rests on the plaintiff. He claims it was belladonna. Were the Jury satisfied it was ? Had the plaintiff sufficiently accounted for the possession of the gallipot throughout the whole time ? As to the identity of the box itself, the defendant claims there is a link in the chain wanting—that a change in the article may have taken place, and that a boy being sent into town with the medicine, furnishes a theory by which that change may have been effected. In questions of this kind it was not required of the Jury to be satisfied beyond all doubt, but to exercise their judgment as men of common sense, and say where does the weight of evidence lead to.

The next question was whether the contents are belladonna. The plaintiff alleged it was analyzed in the city of Boston. This was an appropriate means of determining its nature ; but so far as they undertook to rely upon it, the Jury should look into the evidence, and say whether the party had competent skill to perform the ser-

vice, and applied the proper means to arrive at the results. If this is not satisfactory, they should then examine the other evidence referring to the ordinary means of ascertaining the nature and character of the article.

It was incumbent on the plaintiff, not only to show that he received a different article from that complained of, but that it was belladonna, and that he received an injury from it, and traces the ills of which he complains directly to its influence. The testimony of experts must be availed of. An isolated experiment amounts to but little. It is by a series of experiments that men become familiar with the effects of poison, and skillful in their use.

The defendant claims that all of the symptoms manifested by Mr. Quinby would have resulted from an attack of apoplexy, or a peculiar action of the nervous system. If the plaintiff had satisfied the minds of the Jury that all the symptoms were such as would be manifested by the exhibition of belladonna, and that the plaintiff took that article, it was then fair and proper to infer that the injury resulted from its use; and if the defendant would resist this inference he must show that for a time prior and subsequently the plaintiff was laboring under a disease of that description; and that the seeds of it, so to speak, were in his system. If they supposed from the testimony that the result might as well be attributed to the one as to the other, as the plaintiff must trace it clearly to belladonna, his claim must in that case fail.

The defendant presents another theory—that the plaintiff was hypochondriac, and that all the subsequent manifestations after the first prostration were the effect of imagination. It was in testimony that before this time the plaintiff was subject to giddiness, affections of the head, and loss of memory. But the Court was not aware of any evidence showing how hypochondria would affect the individual. It would be the duty of defendant to introduce such evidence.

If they were satisfied that the article put up had been identified, that it was belladonna, that it was poisonous and produced the effect ascribed to it, then the plaintiff would be entitled to such compensation as he had pecuniarily suffered, if there was negligence on the part of defendant, unless the plaintiff himself was guilty of some neglect on his part.

In regard to negligence on the part of defendant, in a case of this kind where a prescription calls for dandelion, and belladonna is put up, this makes out *prima facie* a case of negligence. The druggist

is bound to put up the article called for, and if by mistake he puts up another, he is responsible for it *prima facie* ; and it is no excuse that he used all the diligence he could, unless he can lay the fault to some other person, over whom he had no control. If he relies on the act of a third party he is bound to present the proof ; as in the absence of testimony going to exonerate him, the law presumes he is negligent.

As to any negligence on the part of the plaintiff himself in the taking of the article before he could be charged with it, a knowledge by him of the operation of the drug should be shown ; and it would be further considered whether he did not show ordinary prudence in the means he did take to avoid accident. If he was advised of the nature of the article, and was careless in taking it, then he could not obtain a verdict ; but if his suspicions were not aroused, and he took such means as men ordinarily take to avoid accident, there was then no fault on his part.

If, under all the circumstances, they considered the defendant guilty of negligence, and that in consequence the plaintiff was damaged in the mode charged in the petition, they then arrived at the important question of damages. In the first place, the plaintiff would be entitled to recover the damages arising from the direct consequences of the act, the physician's charges, &c., and in addition to this, it appeared he was compelled to travel, and so far as this was a necessary mode of restoring his health, it was a proper item of charge, though not to the whole extent of supporting his family. He also claims for his loss of time, being then engaged as an editor, and a public lecturer and preacher. To determine the value of such services they were to look at the ability of the man himself—his position, his popularity—a great many considerations entered into the case, which makes one editor's services more valuable than those of another. If, however, during a portion of the time the plaintiff was capable of performing other services, and was not wholly disabled from exerting himself in other business in a modified degree, it was not right to charge the whole loss of time against the defendant. If the defendant, however, was guilty of gross negligence in putting up the medicine, the jury need not be so precise in fixing the measure of damages ; but if the accident did not involve such charge, they should be as precise as possible in fixing

the amount. All considerations of sympathy in either direction should be laid aside.

The Jury then retired, and in one hour returned with a verdict for plaintiff—damages two thousand five hundred dollars.—*Cin. Commercial*.

PECULIAR EFFECTS OF THE FUMES OF PHOSPHORUS.—It has been ascertained by M. Moignot, an ecclesiastic well known in the scientific world, that the women employed in the manufacture of lucifer matches are very liable to miscarry; and so fully aware have the workwomen become of this peculiarity of phosphorus that advantage has been taken of it to procure abortion. Nor is this all, for the same observer has ascertained that the emanations of phosphorus are excitants of the sexual organs in men. It has been noticed that this effect has been produced after the individuals have been exposed to the fumes for a certain time. It is incumbent upon medical men to investigate the matter, so that reliable data may be obtained.—*Lancet*, Oct. 16, 1858.

STATISTICS OF THE PREVALENCE OF RICKETS AT DRESDEN.—Dr. Kuttner states that, rickets is extremely common in that city. Out of 9,000 patients admitted into the Childrens' Hospital for the last twenty years, 1,654 were rickety or had been so, the latter presenting unmistakable traces of the disease. Thus it would appear that the proportion of rickety children was 20 per cent.; and by leaving out from the total number of 9,000 such children who were less than one year old, and could not as yet be affected with any symptoms of rickets, the proportion rises to 25 per cent. Dr. Kuttner thinks that the cause of this state of things is the wretched condition of the laboring classes of Dresden, as that city is not worse off, in a hygienic point of view, than other capitals. It is neither remarkable that out of these 1,654 rickety children, 198 belonged to journeymen shoemakers, and 162 to journeymen tailors, being 25 per cent. of the whole number. Twins and children prematurely born were rather numerous. As to age, it was found that

the largest number were from two to three years old. The influence of the mother's milk does not seem to have been well marked; for 387 had not had the breast, or had been suckled but a very short time; 360 were nursed for the ordinary period; and 455 for a longer time than usual. As vaccination had been accused of inducing rickets and scrofula, it will be interesting to notice that, out of 1,253 rickety children, 759 had not been vaccinated; 491 had undergone the operation, and 35 had had the small pox. The winter months were noticed to bring the largest number of rickety children into hospital. Dr. Kuttner finally considers that rickets may be owing to the early use, with children, of much bread and potatoes.—*Lancet*, Aug. 21, 1858, from *Journal für Kinderkrankheiten*, Nos. 7 and 8, 1858.

YELLOW FEVER IN SOUTHERN CITIES.—We are gratified in being able to announce that this fatal pestilence is abating its ravages.

New Orleans.—In this city the mortality from yellow fever is steadily diminishing, as will be perceived from the following table:

DEATHS FROM YELLOW FEVER.

15th week, ending October 3,	-	-	-	-	-	380
16th " " 10,	-	-	-	-	-	390
17th " " 17,	-	-	-	-	-	310
18th " " 24,	-	-	-	-	-	265

Charleston.—The number of deaths in this city, from yellow fever, was—

For the week ending October 3,	-	-	-	-	-	64
" " " 10,	-	-	-	-	-	45
" " " 17,	-	-	-	-	-	40
" " " 24,	-	-	-	-	-	22
" " " 31,	-	-	-	-	-	24

The number of deaths from the pestilence, from August 1, to October 9, was 573.

Mobile.—The *Mobile Advertiser*, of the 12th October, represents the mortality from the pestilence as being larger than during any preceding week. The total number of deaths up to that time, from the epidemic, amounted to 931.—*Med. News*.

HOMŒOPATHY AND MORMONISM.—We find by the *Plymouth Journal*, of August 19th, that the Mormons are increasing in the neighborhood, but are complaining, along with the homœopathic quack, that their doctrines are misrepresented and misunderstood—that the book of Mormon and Hahnemann's *Organon*, the *Millennial Star* and the *Homœopathic Review* are not read so extensively as they used to be and should be, and that even when read, it is not with a view to enlightenment. From the controversy which has been going on in the Plymouth newspaper, we learn that a clergyman had been assailing a medical practitioner for his so-termed prejudices against the globulistic quackery, and for his objecting to waste his time in reading the rubbish of Hahnemann, Currie, Black, &c. The latter, in reply, referred to Mormonism, to the spread it had made in this country and in America, to its disciples in many parts of the kingdom, and to their forming a new State (Utah,) as proving it equally to be a verity. He asked the divine whether he had ever read the Mormon Bible, and other works on Mormonism to satisfy himself *truly and clearly* as to the truth or falsity of the new system of religion? He offered, if his reverence would peruse these delectable writings, himself to read the works relating to homœopathy, and to try and profit by their perusal; rightly enough maintaining, however, that the one task was no more required than was the other to convince each of the absurdity of the separate delusions. We need scarcely add, that the clergyman thought Mormonism to be an arrant imposture, denounced its converts as either knaves or fools, and did not think it at all necessary to wade through the Mormon Bible in order to be sure whether his convictions were true or false. The medical practitioner thereupon declared that *he* had a like surety for the humbuggery of globulism, and equally declined the delightful privilege of being compelled to bewilder himself with its cabalistic books of *hocus pocus*. The reverend parson seems to have caught a Tartar.—*Lancet*, Sept. 11, 1858.

ARTIFICIAL DILATATION OF THE LARYNX IN CROUP.—Much discussion has of late taken place at Paris respecting a bold measure in croup—viz., actual catheterism of the larynx and trachea, followed by caustic injections, proposed and successfully practised by M. Loiseau, of Montmartre, near Paris. This operation is to prevent the necessity of tracheotomy, and has been warmly supported

by M. Trousseau, in a report presented by this physician to the Academy of Medicine. Several successful cases have been quoted, one, however, proved fatal in August last.

The Academy has very recently heard another paper on the "Dilatation of the Larynx in Croup," to render tracheotomy unnecessary. The author is M. Pouchut, an eminent hospital physician of Paris. Trials were first made on the dead body, and a silver, truncated, hollow cone, a little smaller than a common thimble, was passed into the larynx, and was felt to dilate that passage perfectly. A series of instruments were contrived by M. Bouchut for the introduction of the cone, or canula, to which a silk thread is fixed, which hangs out of the mouth. Two children, affected with diphtherite, have been operated upon by the dilator, full details being given by M. Bouchut in a paper presented to the Academy of Medicine. Although the results have not been favorable in one case, it has been proved by these operations that a hollow, truncated cone can, in the paroxysms of suffocation of diphtherite, be introduced into the larynx, and there left for several hours, to the great relief of the child. Respiration, in both cases, became perfectly tranquil after the cone was introduced, the same being subsequently removed with the greatest ease. Further trials will prove whether this method of admitting air is preferable to tracheotomy.—*Lancet*, Oct. 2, 1858.

APPLICATION OF SUGAR WHEN LIME HAS ENTERED THE EYE.—The *Indicateur de Mayence*, in relation to cases of workmen becoming blind by the action of lime which has entered the eye, recommends, as a well approved application in the case of such accidents, a strong solution of sugar, which is to be inserted drop by drop under the eyelids. This application can usually be immediately obtained, and completely prevents the caustic action of the lime.—*Journ. de Chimie Méd.*, Aug. 1858.

PERSULPHATE OF IRON AS AN HÆMOSTATIC.—We abstract from the *American Journal Medical Sciences*, a portion of an article condensed from the *Pacific Medical and Surgical Journal*. Dr. H. H. Toland records three cases in which vessels of considerable magnitude were wounded, in which he employed with entire success the persalt of iron, recommended as a hæmostatic by M. Monsel, surgeon to the Military Hospital at Bordeaux.

“Its action on blood and albumen is powerful, and on blood somewhat peculiar. It produces with the latter a voluminous clot, *absolutely insoluble*, which continues to enlarge, for several hours after its application, and becomes quite hard and firm. The following is the formula by which this salt is expressed : $5 \text{ SO}_3, 2 \text{ FeO}_3$.”

“This salt,” Dr. Toland states, “if applied to a superficial wound as soon as made, not a drop of blood escapes, and no pain results from the application. It acts by producing instantaneous coagulation of the blood, and will be found invaluable in hemorrhage from the mouth, nose, and throat, when it is impossible to ligate the vessels, and may be equally efficacious in alarming uterine hemorrhages, either active or passive. In solution, it could be readily applied : it is very deliquescent, and dissolves speedily in water.”

Should these hæmostatic qualities of the persulphate of iron be confirmed on further trial, it will prove a most invaluable article for surgical purposes. Any of our readers in this city, or convenient to it, wishing to try the persulphate, can procure it at the drug store of Mr. J. Keshan, corner of Sixth and Walnut streets.—*Cin. Lancet and Observer*.

LALLEMAND'S PORTE-CAUSTIC BROKEN IN THE URETHRA.—Dr. A. H. Buchanan related to the Nashville Medical Society (September 1, 1853) the case of a young man who was in the habit of introducing Lallemand's instrument for the purpose of cauterizing the urethra, and had the mishap to break off that portion of the instrument which holds the caustic, into the bladder. At the time the caustic-holder was pretty well filled with nitrate of silver. He, soon after the accident, was seen by Dr. B., who made some efforts with instruments to extract the foreign body, but without success. He

then advised the young man to return home, and after some little time, to retain his urine until his bladder was uncomfortably full, and then get into a bath of warm water, on his hands and knees, and with considerable effort evacuate the bladder. The patient, feeling some anxiety about the matter, set about carrying out the orders immediately on his arrival at home, and to his great relief of mind, succeeded in voiding the caustic-holder. Dr. B. stated that he had suffered no material inconvenience from the presence of the caustic in the bladder, which may have been as much as twenty grains.—*Nashville Monthly Record*, Oct., 1858.

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PART FIRST.

ORIGINAL COMMUNICATIONS.

The Cole Case. Reported for the Journal by H. M. MIXER, M.D. Attorneys for the State, A. G. RIDDLE, WM. O. FORREST, A. S. HALL, Prosecuting Attorney for Ashtabula county, and H. K. SMITH, Prosecuting Attorney for Geauga county. Attorneys for the Prisoner, A. H. THRASHER, R. P. RANNEY and L. S. SHERMAN.

Mrs. Adelia Cole died at Bainbridge, Geauga county, Sept. 9, 1857. Former difficulties with her husband, Hiram Cole, his adulterous connection for a length of time with another woman, and circumstances immediately connected with her death, led to the suspicion that it was produced by poison, administered by him, and he was accordingly put upon trial.

It appeared in evidence, that Mrs. Cole swallowed one and a half drachms of laudanum, saturated with arsenious acid, and which, with what floated in suspension, probably amounted to from three to eight grains.

She at once retired to bed, and was very soon asleep. In about three-fourths of an hour she awoke in great agony. Her husband and the family, where they were tarrying, being aroused, found her in spasms.

The indictment charged, in substance, that he procured her death by administering arsenic and laudanum, and subsequently arsenic in coffee and also in epsom salts.

Upon this indictment he was twice tried—once in Chardon, Geauga county, at which time the jury failed to agree, and again at Jefferson, Ashtabula county, Ohio, when he was acquitted.

This report is confined to the more important parts of the testimony adduced in the last trial.

Mr. Hall, on behalf of the State, expected to prove essentially as follows: That Mrs. Cole came to her death by poisoning, administered by her husband, Hiram Cole; that she had taken arsenic a few days before her death; that she died with many of the symptoms of poisoning by strychnia; that a mixture of laudanum and arsenic was substituted by him for a medicine used by his wife; that a teaspoonfull of this preparation, taken at 9 P. M., September 8, 1857, produced acute suffering within an hour; that from the use of medicine administered she became better, so as at 4 A. M. to be out of danger; that the patient continued to improve until about noon of the following day, when her husband gave her a cup of coffee, when the symptoms reappeared, and that between 3 and 4 o'clock P. M., he gave her a dose of epsom salts, when within 30 or 40 minutes tetanic spasms appeared, the sixth or seventh of which proved fatal.

Mr. Thrasher, in behalf of the defence expected to prove that Hiram Cole, being the proprietor of a livery stable, was accustomed to keep a mixture of laudanum and arsenic, which he gave to his horses for worms and botts; that Mrs. Cole took a drachm and a half of medicine, as she supposed, from a preparation that she used to prevent conception, but which was by mistake this mixture; that the quantity of laudanum taken was sufficient to produce death; that it contained an indefinite quantity of arsenic, and that the symptoms were those of poisoning by arsenic, or arsenic and opium.

Dr. D. Shephard testifies—At midnight the symptoms were those of poisoning by opium. Offering her coffee she cramped in spasms, and threw back her head; came out of this when he gave her coffee rapidly. Giving her coffee aconite and camphor the spasms grew lighter; at the end of four hours she sat up in bed and conversed cheerfully. Head perspiring and hot, countenance flushed, spasms came suddenly, were intense, involved voluntary muscles, lasting near a minute, and apparently started by external stimulants. No tenderness at stomach, vomiting or purging; but complained of burning sensation in mouth, throat, and stomach. Spasms came on every few minutes, during which her limbs were straight, head thrown back and a little to the left side—jaws shut. Was perhaps incohe-

rent once. Was very thirsty. Mrs. Cole was peculiarly susceptible to the effects of medicine, especially opium. Was of nervo sanguine temperament. At 4 A. M., the symptoms had so far subsided that the Doctor left, supposing the patient out of danger.

Mrs. A. Briggs testified, essentially corroborating the above. In spasms Mrs. C. stood upon her head and heels. Requested husband to bear heavily on stomach. Complained of back. Moving clothes started spasms. Left at 3 A. M. Returned at 5 P. M., of September 9. Spasms were near together and more severe than on the night before. Died in a spasm. She was stiff after death—both hands shut and arms stiff. Eyes open and prominent. *Toes drawn up*. Could not straighten her arms. She was stiff, and we had to almost stand her up to get her through the door at the foot of the stairs. Her jaws were firm.

Cross-examined.—Don't know as noise disturbed her, but moving the clothes did. The night she died, when we went in, she said, "softly, softly," as if noise disturbed her. *Toes turned up*. Feet were not against the foot-board the night she died.

[We have been under the necessity of so condensing the above as to relieve Dr. Mixer entirely from the responsibility of any imperfections that may characterize it. Important and able testimony from several physicians, as that of Drs. Curtis, Vincent, Harmon, Sweeney, Bennett and Fifield, we are obliged entirely to omit. That of Prof. Cassels, covering the entire ground taken by the State, we give in full, omitting again that elicited on the cross-examination of Dr. Hubbard.—EDITOR. H.]

Dr. L. C. Hubbard, examined by Mr. Riddle.—I am a physician; attended lectures at Willoughby and at New York city; practiced thirteen years, and reside at Ashtabula. Have given the subject of poisons no particular attention. Arsenic, one of the most acrid, excites irritation of animal tissues, partly on account of its caustic nature. It acts also upon the nervous system at large, producing manifest symptoms of dryness and burning in the mouth, throat and stomach. Pressure upon the stomach would be unpleasant after pain had set in, and vomiting and diarrhea would soon follow. In solution symptoms would begin in from a few minutes to perhaps half an hour, and constitutional symptoms would begin soon after vomiting. Pulse would be rapid and small—countenance become pinched, with an expression of distress, and skin cold and clammy. The

effect of arsenic is depressive. Should expect the vomiting would be severe. There would be a good deal of febrile action. After the system had become saturated with it the pulse would be small. In the last stages the nervous symptoms might become prominent. There would be depression and, in some cases, lockjaw and convulsions. Intellect usually remains quite clear. In last stages may be wandering of intellect and coma. Death would commence in the circulation—in the heart; then in the nervous system—the brain; and then the lungs, finishing the patient. The convulsions in arsenical poisoning would mostly seize upon the limbs. Well defined spasms are never, to my knowledge, the first symptom. Intermission of vomiting and purging may take place, but the constitutional symptoms would remain. The irritation may be suspended. Think absorption itself could not cease for five or six hours. If arsenious acid were given should expect a few grains would be formed in the stomach. If fatal dose of laudanum were given should expect intoxication—then stupor, slowness of pulse and breathing. Would affect the nervous system first, then the pulse and breathing. Think opium and arsenic, each in fatal dose, could be readily distinguished by symptoms. Were 1 1-2 drachms of laudanum, containing in solution 1-7 or 1-8 of a grain of arsenic, administered should expect opium symptoms. So with 1-2 grain of arsenic in same quantity of laudanum—and even with one grain of arsenic should expect the laudanum would kill the patient.

Symptoms with strychnine poison are first some agitation of the nervous system and quickness of pulse; after these premonitory symptoms general convulsions would follow—all the limbs would be agitated—breathing difficult and suspended at height of spasm—eyes glaring wide open and lockjaw—strongest muscles would prevail—arms would be crossed—fingers clinched—body bent backwards—abdomen thrown out. Should expect remission of spasm in animals—almost intermission. Have seen three or four dogs and some frogs killed with it. Should suppose the symptoms would be analogous to human beings. Intellect usually remains clear to the last—sensitiveness to noise or rustling of clothes—this last is noticeable during the intervals. Could not, in animals, determine the state of reason during the height of spasm. In some cases there would be vomiting. In most active poisons thirst is produced. Strychnine affects first the voluntary and afterwards the involuntary muscles. In spasms sufferer would rest prominently on head and shoulders

and lower part of the body. In solution would act in from three to fifteen minutes. In a minimum fatal dose should expect death within ten hours after spasms commenced. Should expect spasms sooner in case of a larger dose in solution. Contents of stomach would modify action some; full stomach would retard, while much gastric juice would facilitate action. Think the symptoms are well defined; a wide contrast between it and arsenic. Could determine from symptoms pretty accurately what the poison was. Should expect to find the body rigid after strychnine—frogs were invariably so—don't recollect in regard to the dogs. In arsenic poisoning I should expect a flaccidity. My opinion is that when death occurs during a convulsion, from any cause rigidity remains. If a person, upon going to bed at 9 o'clock P. M., takes a dose of some kind of poison, and in forty-five minutes is seized with well-defined tetanic spasms—these spasms lasting two or three hours at intervals, with some thirst and slight uneasiness of throat and stomach, and then gradually pass off, the patient all the while remaining conscious—I should say that strychnine was the poison taken. And suppose this person to be a delicate female, aged 23, and it is known that she took at the time mentioned one and a half drachms of laudanum, with one-sixth to one-eighth of a grain of arsenic in solution, I should still think that the laudanum and arsenic did not produce the symptoms, but that they were due to strychnine.

Arsenic sometimes produces trembling, spasms and lockjaw, but never, so far as I know, general tetanic spasm. Indeed, I object to the use of the term "tetanic spasm," as applied to the affection resulting either from arsenic or strychnine. Tetanus is tonic spasm—spasm not alternating with relaxation—and the spasm of both arsenic and strychnine is clonic—that is spasms alternating with relaxation. Still I think there is a wide contrast between the spasms of arsenic and strychnine—though neither of them are truly "tetanic." If the female I have supposed continue comfortable from the time the spasms passed off the first night until 3 o'clock P. M., of the next day, at which time, after taking a cup of coffee, she expresses some apprehension of a return of spasms—at 4 o'clock 30 minutes takes a dose of epsom salts, (say a teaspoonful,) and at 5 o'clock is taken with the same kind of spasm as those from which she suffered the night before, and in the sixth or seventh spasm died, I should say the death was attributable to some violent disease suddenly supervening, or to poison. And, if we exclude the supposition of

disease, I should suspect strychnine. I do not know of any other poison capable of producing such symptoms. Should not think they could be caused by a teaspoonful of laudanum and one-eighth of a grain of arsenic, taken the night before.

* * * * * * *

Prof. J. L. Cassel, examined by Mr. Riddle.—I am Professor of Chemistry in the Cleveland Medical College, and have been teaching chemistry for 23 years. Received my medical education at Fairfield, Herkimer county, N. Y. Have practiced medicine some. I received certain drugs from Mr. Smith, of Chardon, for examination and analysis: One labelled "Vest Pocket;" second, "Stand Drawer;" third, "Horse Medicine;" fourth, "Mrs. Cole's Medicine;" fifth, "Epsom Salts." The first and second I found to be arsenious acid; third to be laudanum and arsenic, some in solution and some as a sediment; from taste I found the fourth to contain bloodroot, and by test some laudanum; the fifth was epsom salts. I examined the entire stomach, and its contents, of Mrs. Cole, received from Mr. Sprague. I tested for arsenic, corrosive sublimate, strychnine and oxalic acid. Thought I detected slight traces of strychnine, but nothing upon which I could rely. Wish to be understood as saying that I found none. Found no poison in the stomach. Cannot say whether the stomach was reddened by previous inflammation or by infiltration of blood after death. The stomach submitted was some red. Think arsenic would show irritation of coats of stomach. Finding no arsenic in the stomach would not be positive evidence that the patient did not die from that poison. Some time afterward I examined the liver and portions of the intestinal canal. Found small quantity of arsenic in the liver; but not more than I should expect from previously taking arsenical preparations in medicinal doses. Arsenic is found in largest quantities in the glands—as liver, kidneys and spleen. As some also goes into the circulation, it might be found in other parts of the body. Strychnine is classed among narcotic and irritants, and is also called a narcotico irritant. It is almost impossible to mention any one symptom that attends throughout all cases of arsenical poisoning. Arsenic is a mineral poison. Taken in solution symptoms are heat and burning in stomach, throat and intestines—bloody stools, &c. Would not endure pressure over the region of the stomach. Mind is clear, up to the time of convulsions. Arsenic acts through the medium of the circulation. No matter how applied it acts upon the stomach. Convulsions generally arise in the latter stages.

If the arsenic acts as an irritant upon the stomach see no reason why we may not get convulsions. Would come on slowly, affecting voluntary muscles, afterwards the involuntary. Think it is not to be expected that convulsions should occur as a first symptom. There may be interruption in the symptoms of arsenical poisoning. Patient may express himself free from pain, yet hidden operations be still going on. Do not think a return would be expected after a lapse of twelve or fifteen hours. Cannot arrest the progress of arsenical poison after absorption has taken place. Should think it would be impossible for a return of same symptoms after five or six hours. Should think if arsenic was taken in less than poisonous dose it would be completely eliminated from the system in two weeks. Laudanum is a narcotic poison. The effects are first exciting, afterwards sedative. In nervous persons the circulation is rapid—hence would take effect sooner, as it would be sooner carried through the system. One drachm would be a large medicinal dose. Should think 1 1-2 drachms might be a fatal dose to a sensitive female. By experiment found that one drachm of laudanum would not dissolve quite one-tenth of a grain of arsenic. The effect of arsenic is very uncertain. Cannot tell how much arsenic one would turn out from a bottle containing arsenic and laudanum mechanically mixed in such proportions as horse medicine, and from like bottle. Think that with one grain of arsenic mixed with one drachm of laudanum, the narcotic symptoms would predominate, and arsenic would go on, and hidden by narcotic symptoms, might produce death. Tried experiments with horse medicine. Gave two cats a teaspoonful of the horse medicine without shaking up. Died with narcotic symptoms. No signs of pain. Strychnine is an extract from *nux vomica*. Strychnine is an alkaloid. Do not know what a minimum fatal dose of strychnine would be. In one case a patient took four grains. In another two were put into "Hoffman's Bitters." These were fatal cases, and I found strychnine in the stomachs of all of them. It is supposed to be taken into the circulation, affecting spinal chord and thence the muscles. Among the first symptoms of strychnine are convulsive twitchings of the lower extremities. Afterwards general convulsions.

There is sometimes heat in the region of the stomach and also thirst. Patients usually die during a spasm—not always. They are sensitive to surrounding noises and movements—mind generally clear after tetanus is established. I do not know as it differs in any respect from tetanus produced by wound or other cause. Arsenical

poison usually has its convulsions near the last. Think the symptoms attending strychnine and arsenical poison can be separately identified. I should suspect from certain trains of symptoms, certain agents as their cause. I think I could detect strychnine symptoms from those of any other poison. If I could arrive at the history of the symptoms in minutia from the first, I could tell. Could distinguish between laudanum, arsenic and strychnine under like circumstances. Strychnine is a compound body, and may be decomposed in the tissues of the body before death. No strychnine has ever been found to my knowledge in the animal tissues when given in minimum doses. Have often found strychnine in the stomach—suppose it was lodged upon the mucous membrane. Suppose strychnine is decomposed by the tissues, because it is not poisonous to other animals. Have tried Gerdwood & Rogers' test, when I supposed there was strychnine, and found none. I think in the event of the administration of six grs. of arsenic, partly in solution and partly in suspension, and death occurs in 20 hours—arsenic would be found in the stomach.

The State here supposed a number of cases, and asked opinion of witness, as follows :

Suppose a patient—a female, 22 or 23 years old, of slender yet ordinary health, with more than usual predisposition to medicinal influences—at 3 1-2 hours after her usual supper—takes a teaspoonful and a-half of some unknown liquid and retires—that within 45 minutes she is attacked by well-defined tetanic spasms involving the whole voluntary muscular system—coming on suddenly—continuing a few minutes—returning after short regular intervals, and succeeding each other in rapid succession, with increased violence, for 2 1-2 hours—accompanied by extreme sensibility of surface of body—intolerance of sounds and slight movements of the bed clothes, and at one time thrown into violent spasms by a drop of water falling upon her neck—these spasms accompanied by difficult respiration—patient complaining of burning sensation in throat and fauces, together with an absence of nausea—vomiting or purging—the patient insisting upon being held down by the application of force over the chest and abdomen, and these occurring in the absence of tetanus either idiopathic or traumatic—what in your opinion was the cause ?

I know of no agent capable of producing that condition of things except strychnine or some of its compounds.

Suppose further the case to have reached its maximum at 12 o'clock and from that time the symptoms gradually abate—the spasms are

less frequent and less severe until at 3 o'clock they entirely cease—with lessened sensibility—no complaint of burning in throat or fauces—no thirst, and from that period patient continues to improve until 6 o'clock, at which time she arises, has her bed changed—complains of dizziness of the head while standing—converses cheerfully with her attendants and has a passage of urine at 7, partakes slightly of food with relish, a portion of which is soon vomited—from 7 to 9 continued improvement is made, at which time all indications of sensitiveness have passed away—the patient is cheerful—converses with visitors and complains only of slight dizziness of the head while standing—with a bad taste in the mouth—with some soreness of the muscles—at eleven A. M. falls into a sleep which is undisturbed, and from which, in 1-2 an hour she awakes naturally—at a little past 12 she partakes of food with a relish, a part of which is vomited, and she has another passage of urine—the patient progresses until 1 1-2 o'clock P. M. with constant improvement, what do you say to the probability or possibility of a return and with increased violence, from the dose already named as taken the night before?

I do not see upon what principle it can be possible.

Suppose that the before-named dose contained 1 1-2 drachms of laudanum with a gr. of arsenic partly in solution and partly in suspension, would that account for the previous symptoms and the cause?

I think not. Suppose the quantity of arsenic was increased to 4 grs. would you expect the foregoing result? I do not see how they could produce it. Suppose the above case to go on till 4 1-2 o'clock afternoon, at which time a teaspoonful of epsom salts is taken in solution—what effect would that produce? I would not expect any unless a slight laxative effect. Suppose that within 45 minutes after taking the salts the patient should be seized suddenly with tetanic spasms in all respects similar to the first named, only they are more violent and follow each other with greater rapidity, until within an hour after their appearance the patient dies in a paroxysm—that their course has been accompanied with difficulty of breathing—the extreme sensitiveness before-mentioned—slighter thirst—a distorted countenance and glaring eyes—to what in the absence of tetanus traumatic or idiopathic would you attribute this death? I know of no agent that could produce it but strychnine or its compounds. In what way would that opinion be modified by the following facts? At death the body is left with the fingers nearly closed—toes turned

up—eyes prominent and staring—lips everted—the body permanently rigid, which remains till decomposition—that several days before death the patient took a large dose of arsenic producing well-defined arsenical symptoms—that after death chemical tests detected no poison in the stomach, and very slight indications only of arsenic in the liver. Answer. I do not know as those facts would modify my opinion at all.

Cross-ex'd by Mr. Thrasher—I have not practiced medicine for twenty years. Have never witnessed a fatal case of poisoning of any kind. Derive my knowledge of poisons and their effects from the books. In my experiments I put strychnine into laudanum and with some difficulty found my strychnine again. I then tested the “horse medicine” and found no strychnine, nor was there strychnine in any of the medicines or material submitted to me for analysis.

Arsenic is undoubtedly an antiseptic agent. Generally find the bodies preserved several months in cases of arsenical poisonings. I think laudanum would accelerate the absorption of arsenic. Strychnine produces death in my opinion by asphyxia. Do not know the cause of heat. There are many varying theories upon the subject. I incline to the adoption of Leibig's theory as to the cause of animal heat. If arsenic were easily found in 1-2 lb. of the muscle of the thigh of a dead human body, and morphine in other parts of the same body, and it were known that the person had taken before death a dose of arsenic and laudanum, I should readily conclude that a large dose had been taken and death produced by it. Think that coffee would accelerate the absorption of arsenic. The books give cases where large doses of arsenic have been taken and have not operated for a long time. In one the arsenic was found enveloped in a mucous cyst, which prevented absorption. Such a thing is barely possible, for when the arsenic was lodged there would be no vitality of the stomach and the power of absorption would be lost in that part, so that even if you could suppose the cyst to be removed, still no absorption would take place. Do not think the arsenic would be absorbed by the other portions of the stomach. If the cyst were destroyed by the gastric juice the poison might possibly act, but do not see how the gastric juice could destroy it. I hardly think the cyst would be removed. Do not see how it could be. I have not examined Taylor on this point. I think he theorized just as I am now theorizing. It is only theory. They are matters about which I do not know and am ready to acknowledge I do not believe any one else does.

The evolution of heat is not always the result of condensation. In slaking lime the water becomes solid and heat is evolved but it is not always the case that heat is the result of condensation. Heat is evolved sometimes by condensation and sometimes when there is expansion—as in the explosion of gun powder. It is allowed there is such an agent as heat, but we do not know all the laws which govern its evolution. In a disease that shuts off from the lungs a portion of the atmosphere, I should not be able to account for unusual heat in the body. There is always an undue amount of heat where there is great muscular contraction. Even on Leibig' theory there may be oxygen enough in the body to produce heat.

[Court here adjourned till 8 1-2 o'clock to-morrow morning.]

SEVENTH DAY, TUESDAY, NOVEMBER 23.

Prof. J. L. Russell's cross-examination continued by Mr Thrasher.

—I did testify on the former trial of this case that I was unable to account for the great heat in the body of Mrs. Cole after death on the theory of strychnine poisoning—except upon a supposition of artificial combustion, and that I doubted. That is my opinion now. The toes are said to have been turned up in the case of Mrs. Cole. They were turned up in the Marion County case as stated by competent medical witnesses. That was a case of strychnine poisoning in which I was a witness, and in which I found strychnine in the stomach. (This was ruled out by the Court.) I think the turning up of the toes would be very rare, as the theory is that the stronger muscles prevail. Burning in the throat and stomach and great thirst sometimes occur in strychnine poisoning.

Did not you testify on the former trial of this case that there was an absence of thirst in strychnine poisoning? I may have testified so, but I am not an "old fogey." I have progressed some since then. Question. I read from a report of your testimony as follows:—In tetanic convulsions from strychnine there is not much inclination to drink water,—rather an abhorrence of it. Is that an accurate report of what you said on that occasion? It is, and I think so yet. There is a loathing of water arising, as I think, from an inability to swallow. May not tetanic spasms be produced in 3-4 of an hour by the exhibition of a fatal dose of arsenic? I can see no reason why they may not be. Is not burning of the throat, fauces and stomach characteristic of arsenical poison? Yes. Is not great thirst indicative of arsenical poisoning? Yes, peculiarly so. Is not clear intel-

lect also indicative of arsenical poisoning! The intellect is ordinarily clear in arsenical poisoning, but I do not know that this is peculiar to arsenic. Is not pain in the back a symptom of arsenical poisoning? It is. Is not faintness a symptom of arsenical poisoning? Yes. Does not great heat attend the cases of arsenical poisoning? Arsenic irritates the mucuous membrane of the stomach, and when there is irritation there is ordinarily heat.

As a matter of fact heat attends the early stages of cases of arsenical poisoning, whereas in the later stages they are usually characterized by prostration and a diminution of caloric. Is not the diminution of heat in the latter stages peculiar to the chronic cases—those that survive several days? It is. Is not extreme sensitiveness to external impressions characteristic of *tetanus*, however produced? It is. Is it peculiar to strychnine poisoning? It is not. After tetanic spasms have supervened is it possible to determine from the spasms themselves what agent produced them? It is not. I could only form an opinion by watching the whole train of symptoms from beginning to end. Is rigidity of the body after death peculiar to strychnine? It is not. After death from strychnine the body is ordinarily rigid—at least this has been true in all the cases coming within my knowledge—but when death occurs during a spasm, however induced, I should expect the body to remain rigid. May there not be opisthotonis in tetanus caused by arsenic as well as in that caused by strychnine? I know no reason why it may not occur. May not lock-jaw also be produced by arsenic? It may. Would there not be the same difficulty in breathing in the tetanic spasms caused by arsenic as in those caused by strychnine? There would be. Is frothing at the mouth diagnostic of strychnine poisoning? It is not. It arises from respiration during spasms attended with lock-jaw. Is the stomach always found inflamed in cases of arsenical poisoning? It is not. Is vomiting always present in cases of arsenical poisoning? It is not. Is purging? It is not. Is tenderness of the stomach an invariable attendant upon arsenical poisoning? It is not. It is due to irritation, and if the poison did not irritate the stomach there would be an absence of tenderness. Is arsenic always found in the stomach when death is caused by it? It is not. Does not arsenic possess peculiar antiseptic power? I believe it does. Cases are reported where bodies have been found preserved for a great length of time. Is not suppression of the secretion of urine a symptom of arsenic poisoning? I do not know, but will thank you to state how that is. If by the Stas process the alkaloid morphia were

obtained, would not the alkaloid strychnine if present be found by the same process? Most certainly it would. If one were destroyed the other would be. Is not dizziness indicative of both opium and arsenical poisoning? It is. Is not a tendency to fall into a drowse and then start up suddenly indicative of both opium and arsenical poison? It is. To what would you attribute the glaring eye and prominent eye-ball occurring during tetanic spasms? Is it peculiar to strychnine or is it due to the spasm however induced? It is attributable to the spasm. Have you ever witnessed a fatal case of poisoning with arsenic and laudanum? I never have. Now, Prof. Cassels, it seems we agree in everything, except as to the remissions in arsenical poisoning. Let us look into that matter. You say you are dependent upon the books for your knowledge upon the subject? I am. Do not Christison, Beck, Taylor, Wharton & Stille and Dean, teach the doctrines that remissions and even intermissions have occurred? I believe they do. (Mr. Thrasher here read from authors referred to several cases in which remissions and even intermissions occurred varying in duration from a few hours to several days, and asked witness if he recognized these cases as authentic? Witness said he did.)

This closed the scientific testimony on the part of the State.

DEFENCE.—SEVENTH DAY—AFTERNOON SESSION.

Dr. L. A. Hamilton examined by Mr. Thrasher.—I am a physician—received my medical education at the Berkshire Medical School, in Pittsfield, Massachusetts. Have practiced Medicine and Surgery about 30 years. I received a portion of liver and intestines February 15, 1858, said to be remains of Mrs. Adelia Cole, which I was requested to test for arsenic. After preparing the material, we subjected it to several of the usual tests, all of which showed unmistakably the presence of arsenic. My partner, Dr. H. M. Mixer, was associated with me in making the analysis. I was afterwards requested to make another examination of the body of Mrs. Cole. It was disinterred April 10, 1858—seven months after death, at the request of the prisoner for the purpose of testing for strychnine. I found it in a very good state of preservation. The viscera had nearly all been removed previously. In dissecting out the portions I removed for analysis, the muscles offered nearly or quite as much resistance to the knife as in the recent subject, and indeed (except those portions a little dried) the usual fresh color of the muscles was preserved. The process of decomposition had not commenced at all in the remains left after previous examinations. The body had re-

mained quite dry. The grave clothes had not been wet by the admission of water into the coffin. I removed one lung which I found loose in the chest, together with a small quantity of blood. I removed also the entire dorsal portion of the spinal column, and about one pound of muscle from the anterior portion of the thigh. These were placed separately in clean glass jars and sealed up for future examination. I also cut open the stockings upon both feet so as to expose the toes, and found them all turned down close upon the ball of the foot. In analyzing and testing all of the material obtained, Doctor Mixer was associated with me. We examined the lung and blood for meconic acid to verify the presence of opium. We did not detect meconic acid. Some specimens of opium do not contain it. We examined the muscle for arsenic by Marsh's process and found it in considerable quantities—fifteen or twenty mirrors were deposited on porcelain and tested to satisfy ourselves that it was arsenic and nothing else. The spine was subjected to maceration to free it from blood preparatory to the use of M. Stas' process for the detection of strychnine. This analysis was made with all possible care and no strychnine detected. We did obtain morphine in small quantity, sufficient to have destroyed the color tests for strychnine if any had been present. To determine the presence or absence of strychnine with morphine, we used a solution of tannin. With this the smallest quantity of a salt of strychnine may be precipitated when in solution with morphine. Finding morphine and no strychnine by this process is to me conclusive evidence that no strychnine could have been present in the body, as it would be impossible to procure one without the other by this process if both were contained in the material used. It was arranged beforehand that the portions of body removed at the disinterment were to be divided with the State, hence we took a large quantity. The State refused to take any portion of the remains, and we therefore used the whole in our tests.

Strychnine operates upon the spinal cord, and in fatal cases is deposited upon it or its investing membrane much more abundantly than anywhere else. On this account we selected this part for examination. The symptoms of poisoning with strychnine are, permanent difficulty of breathing, coming on soon after the poison is taken and continuing with greater or less severity until death takes place; spasms commence in the lower extremities, slight at first, but gradually increase until general convulsions, involving all the voluntary muscles, are developed. The urine was discharged

involuntarily in all the cases I have witnessed, both in males and females. During the convulsion the respiration ceases, the jaws are fixed, the tongue black, and the eyeball glaring, with dilated pupil. The pulse was irregular, and often intermittent. Of the whole number of animals to which we gave strychnine, not one could be induced to drink, although water was invariably offered to them. No unusual heat was observed, either before or after death, which usually took place during a paroxysm. In all cases, witnessed by me, the bodies were flacid at the time of death. The taste of strychnine is intensely bitter, and not easily disguised. It is absorbed and enters the circulation without undergoing the process of digestion. According to the experiments of Mr. Harley, it produces death by mingling with the blood and destroying its capacity for uniting with oxygen or parting with carbon. Whether this is, strictly speaking, correct, I am unable to say. I do not think the evidence conclusive upon the subject. In our experiments upon animals, we have without difficulty found it in the contents of the stomach, liver, blood, and spinal cord. If the death of Mrs. Cole had been produced by strychnine, a sufficient quantity must have been deposited upon the spinal cord to have enabled us to detect it. In some of our experiments upon animals, we gave arsenic, strychnine, and laudanum, or morphine. On examining for it, both alkaloïds were found mingled together.

The quantity of opium, necessary to produce death, is uncertain; from 4 to 6 grains would be fatal in some cases. One and one half drachms of laudanum contain more than six grains of opium, if all the strength is extracted. Six grains of opium is an unsafe dose for a feeble person, unusually susceptible to the influence of medicine. Have seen remission of symptoms in one case of poisoning with morphine, in a young child. Spasms and convulsions are sometimes produced by opium. We found that $1\frac{1}{2}$ drachms of the "horse medicine" contained, by accurate analysis, 9-16 of a grain of arsenic. The smallest fatal dose of arsenic on record, is 183-100 of a grain. In poisoning with arsenic, the symptoms commence in from half an hour to one hour, usually, but have occurred sooner, and are frequently delayed much longer. So also is the period varied at which death takes place. An average period, as stated in the books, is from six to twenty-four hours. Tetanus is produced by wounds, or more rarely occurs as an idiopathic disease; is attended

with great sensibility of nervous system. The intellect is clear. Cases of tetanic spasms are related in the books, as occurring in from one-half to three-quarters of an hour after arsenic has been administered. The symptoms produced by arsenic, and also opium, are not uniform, but will vary very much in different cases. Such also is the case with all the narcotic and narcotico-irritant poisons. We cannot rely with certainty upon symptoms alone, to determine what poison was taken.

What do you say as to $1\frac{1}{2}$ drachms of laudanum, fully saturated with arsenic, taken by a female with feeble constitution, nervous, and peculiarly susceptible to the operation of medicines producing tetanic spasms in from half an hour to one hour after being taken? It would not be its usual effect, but can see no reason why such result might not follow. Where a person has taken $1\frac{1}{2}$ drachms of laudanum, saturated with arsenic, under circumstances when she may have taken from 3 to 10 grains of arsenic besides that in solution in the laudanum, and there follows tetanic spasms, a remission of from six to twelve hours, a return of the spasms and death in twenty-one hours from the time of taking it, and, after death, arsenic and opium are found in the body, and no other poison, what do you say was the cause of death? It is only reasonable to conclude that death was caused by that dose. When death has been caused by arsenic, are the stomach and intestines always found inflamed? No.

In cases of death by arsenic, is arsenic always found in the stomach? No. Are the symptoms any indication of the quantity taken, when a fatal dose has been given? That is, do they indicate whether the quantity was large or small? No. What do you say of intermissions and remissions in cases of arsenical poisoning? Such cases are reported in the books too frequently to admit of doubt about their occurrence. What do you say as to the probability or possibility of a female of feeble health, nervous constitution, and peculiarly susceptible to the effects of poison, having taken $1\frac{1}{2}$ drachm of laudanum, with from 2 to 6 or 8 grains of arsenic, experiencing the following symptoms: Tetanic convulsions in three quarters of an hour after poison taken, which continued more or less severe for from four to six hours, with remission of more or less quiet of from ten to twelve hours, with a return of the convulsions and other distressing symptoms, and death, in twenty-one hours. Might or might it not occur? It might occur. What treatment ought a patient

receive, after having taken into the stomach $1\frac{1}{2}$ drachms of laudanum, and a fatal dose of arsenic? Copious draughts of mild fluid, and followed with active emetics until the stomach is emptied of poison, followed by cathartic of castor oil, or other similar cathartic medicine. What influence would strong coffee have upon such a dose of poison? No influence, as an antidote. It would only act as a diluent. On what structure does arsenic act? It acts upon the mucous membrane and nervous system. After a fatal dose of arsenic and laudanum has been taken, and a remission occurred, what effect would a small dose of epsom salts, containing the usual impurities—either chloride of lime, soda, or magnesia—have upon the patient, probably? No important effect would be produced, unless some chemical change was effected. If, by the action of chlorine (liberated from the chloride) in the stomach, oxygen should be set free and brought into contact with arsenious acid, it might convert it into arsenious acid, which is a much more virulent poison. That such changes may take place in the stomach, is an established doctrine with the profession. Indeed, every nurse understands that salted food must not be given to patients taking calomel, lest the chlorine of the salt convert the calomel into corrosive sublimate.

Possibly the conversion, in some manner, of arsenious into arsenic acid may account for a return of symptoms in an aggravated form, after an intermission has occurred in arsenical poisoning.

Court adjourned.

EIGHTH DAY, WEDNESDAY, NOVEMBER 24.

Dr. Hamilton, cross-examined by Mr. Riddle.—From teaspoonful of epsom salts should not expect much impurity. Should expect in twenty hours the arsenic might have been all absorbed, and so passed from the stomach, and from my reading should expect to find it most abundantly in the liver. Should expect ordinarily to find the stomach inflamed. Till since the last trial I had no experience in strychnine poisoning. I have made the experiments with reference to this case, and have experimented upon six animals. In testing for strychnine I used the formula of Stas. In two cases we examined the stomach, and in both found strychnine. One of the animals we poisoned with it—the other we suspected had taken it. In no one animal did we examine the blood, liver and stomach—but we examined all these in different animals, and in every instance

found the poison. Think it can be found in any case of death from strychnine, when taken into the stomach. If injected into a vein think so small a quantity may prove fatal as to escape detection. Think I can find it if taken into the stomach, and if I did not find it I should state with confidence that death did not result from it, or that there was some error in my process. Think the color tests would detect the presence of the $\frac{1}{50000}$ part of a grain. I see no reason why it may not be eliminated from animal matter as well as from the nux-vomica. The animals upon which I experimented were those I had myself poisoned with strychnine, except the one before mentioned. The difficulty of breathing is caused, I think, by a change in the blood; yet it may be from want of nervous influences. Difficulty of breathing continues until death.

If strychnine should be decomposed in the system it would be no longer strychnine. I think, however, it is not decomposed. Think with good materials, in skillful hands and with care, there should not be a failure. I mean in the human body. If failure occurred I should look for some error in the process. I attribute the failure to find strychnine in the human body to the presence of morphine, or some other medicinal agent in the stomach or system. I think when arsenic and laudanum are given together, the arsenic would counteract some of the influence of the opium, so that a larger dose of laudanum would be required to prove fatal than when laudanum is used alone. Think the effect of the arsenic might be covered up measurably by the laudanum. In most cases the effect of laudanum would pass off in ten or twelve hours; yet it might continue much longer. Should expect the symptoms of the arsenic would be modified while the effect of the laudanum was felt. The first effect of the laudanum would be stimulating, and there might go along with it the irritating effects of the arsenic. I reason from theory simply. In traumatic tetanus laudanum, in large dose, would be a remedy.

Re-examined by Mr. Thrasher.—When the stimulating effects of a large dose of laudanum are passing off, I should commonly expect narcotic symptoms—though it would influence different persons differently. In some it produces sleeplessness—in others a sense of drowsiness, but at the same time an inability to sleep. Such persons would appear to sleep and then start up suddenly.

To what do you attribute the failure to find strychnine (if present) in the body of Cook, in the “Palmer case”? If that death were caused by strychnine the presence of morphine, which it appears

Cook had taken just previous to death, is sufficient to account for the failure to detect the poison by the color tests, upon which Taylor relied.

Dr. H. M. Mixer, examined by Mr. Thrasher.—I am a “Doctor,” and have had a legal right to call myself so about five years. I received my medical education partly at the Cleveland Medical College and partly at the Berkshire Medical College. I have practiced at Chardon, Geauga county, four years in partnership with Dr. Hamilton—the last year alone. I have not turned my attention to the subject of poisons specially until since I was engaged by Mr. Thrasher to make examinations and analyses in this case. Had previously devoted about such an amount of attention to the subject as medical men ordinarily do when engaged in practice. About the middle of February, 1858, Mr. Thrasher brought into my office a semi-putrid mass of animal matter, which he said was a portion of the remains of Mrs. Adelia Cole. I should not be able to say from their appearance to what part of the viscera they belonged, but was told by him they were portions of the liver and intestines. He said he wished an analysis made of them by Dr. Hamilton and myself. I was told we had less than half the liver—the other portion having been taken by the State to Prof. Cassel, at Cleveland. The liver and intestines were contained together in a glass jar, and with them a quantity of fluid. In this condition judged that nothing would be gained by separate analysis, and therefore tested the whole together for arsenic. We found it in perceptible quantity, but can form no estimate as to the amount obtained. I cannot say how long arsenic will remain in the body after being taken in less than a fatal dose. I do not think the question definitely settled. Some animals upon which arsenic was comparatively innocuous, and to which the poison had been given in large quantities, have been found with arsenic in the liver twenty or thirty days after taking the dose; but I do not believe this establishes a rule upon which reliance can be placed with reference to its effects upon the human animal. I gave to a dog one grain of arsenious acid. Ten days after I killed him. There was no arsenic in the liver, at least I found none. I used the Marsh process.

To another dog I gave 1 gr. of arsenious acid, and 6 days subsequently killed him. The Marsh process in my hands failed to detect a trace of arsenic in the liver. Having emptied the bladder, I swallowed 25 drops of Fowler's Solution. Six hours afterwards I

for the first time after taking the dose voided urine. It contained an appreciable quantity of arsenic by the Marsh test. I know these experiments are by far too few to furnish a basis for an opinion—still I incline to the notion that a medicinal dose of arsenic would be eliminated from the human system much sooner than the time commonly supposed to be required. Dr. Hamilton superintended in person the second disinterment, and brought back 3 jars of material from the body of Mrs. Cole. The first contained 1 pound of muscle taken from the inside of the thigh. The second held one lung and a small quantity of blood lodged in the cavity of the thorax. The third contained a portion of the spinal column, including bone, muscles attached and “spinal marrow,” in all I should judge about 5 pounds. The muscle of the thigh was in a perfect state of preservation. I could not judge so well about the muscles of spine, as they were bruised some in process of removing them. I judged, however, they were not so well preserved. The analysis of muscle of thigh was commenced immediately after its reception, and was conducted by Dr. Hamilton and myself. The examination of spine was deferred about three weeks in consequence of the absence from town during part of that time of Dr. Hamilton. We obtained arsenic from the muscle of the thigh by the Marsh test. I think we obtained 5 or 6 mirrors upon porcelain from this muscle. In the examination of spinal column for strychnia, we pursued the Stas method. We did not find in it strychnia. We did find morphia. Finding morphia and failing to detect strychnia, would in my opinion render it highly probable that strychnia was not present. Still it may be true that one of the alkaloids is decomposed in the tissues of the human body while the other is not. So far as I know strychnia has never been detected in the tissues of the human body. I suspect when failures have happened they may be due to the fact that patients have been medicated with morphia, and this would destroy the color tests. This is only conjecture—the question is not yet settled.

I ought to say I had never before analyzed any portion of the human body for the vegetable alkaloids. I had previously examined portions of dogs known or supposed to have been poisoned with strychnia, and had never failed to detect it. We dug up a dog that had died under circumstances which led us strongly to suspect he had been poisoned with strychnia. He had been buried 4 months and putrefaction was very far advanced. We found strychnia in

both the stomach and liver. Before making an analysis of the body of Mrs Cole we had killed 5 dogs with strychnine, and in all of them had found the poison. We had tested the liver, blood, contents of stomach and spinal cord. We did not examine all these parts from the same animal, but ordinarily more than one of them. The largest dose given to any one of them was 1 gr. and generally much less was sufficient to destroy life. To one dog we gave 1·6 of a gr. of strychnia, and an hour afterwards we gave 1·5 of a gr. It was a large dog, weighing I should judge some 60 or 80 pounds. The poison was given in lard. He died in five minutes after taking the second dose. I thought the first dose probably killed the animal. We removed for the purpose of analysis the spinal cord and from it obtained strychnia. In one experiment we thought we obtained more of the alkaloid from the spinal cord than from a like amount of tissues taken from any other part of the body. I think the color tests reliable. We proved the crystalline residuum obtained from dogs to be strychnia with the same certainty that we could establish the identity of the strychnia of the shops. We tested them side by side. We had a much larger quantity of material from the body of Mrs. Cole upon which we operated, than we ever used in testing for the poison in animals. It was also the part in which we thought we found strychnia most abundant in animals. In the light of our experiments I think I can safely affirm that strychnia can be detected in the bodies of dogs when taken into the stomach in minimum fatal doses. This would not be conclusive evidence that it could be detected in the human body, but in my judgment would render it highly probable. I feel confident that the doctrine soon will be that strychnia in fatal doses must be detected in the tissues of the human body.

I know no reason why there should be a difference between the human stomach and the stomach of animals as to the decomposition of strychnia. In dogs strychnia is undoubtedly absorbed into the blood vessels directly from the stomach without undergoing digestion or decomposition. I think this will be found equally true in man. We had no lens with which to examine the residuum obtained from animals, and cannot say from the form of crystal that we obtained strychnia. I think the color tests reliable—I know of no source of fallacy in them. I mean they are conclusive when obtained. A failure to obtain them would not show absolutely that the substance under examination was not strychnia, because the presence of mor-

phia interferes with the reactions. We had difficulty in finding strychnia when in combination with morphia—a difficulty we did not entirely surmount. A solution of tannic acid in presence of a solution of a salt of strychnia gives a white precipitate, and this is not interfered with by the presence of morphia. Other substances may and do produce a white precipitate in the presence of solution of tannin, so that the obtaining of the precipitate does not establish undeniably the presence of strychnia, whereas a failure to obtain the precipitate does, so far as I know, prove the absence of the alkaloid. With this test we found—so far as the test goes—strychnia in animals poisoned with strychnia and morphia. This test we also used in our examination of the remains of Mrs Cole.

The symptoms of strychnia poisoning are not uniform. The most prominent symptom, and almost the only one invariably present in the animals upon which we experimented, was difficulty of breathing. In a few minutes after taking the poison, (I should say immediately after the absorption commenced) although it was cold weather—the dogs would be lolling, and this disturbance of the respiration would increase until during the height of the spasm—breathing would be entirely suspended. This difficulty of breathing ceased only when death took place. It was so apparent as to attract the notice of any one who should be present. Normal breathing never returned after the poison first produced symptoms.

The animals were never thirsty while laboring under the effects of strychnia. We repeatedly offered them water—both in a dish and by spilling it on the floor; but they would go away from it—seemed to loathe it. Did not notice an instance of rigidity after death, in any of the dogs. Thought the ordinary “rigor mortis” was delayed by the poison, though I confess I do not know at what time it takes place naturally in dogs. In two or three instances, I did not remove the portions destined to be used in our analyses until 12 or 15 hours after death, and at that time, always found the bodies flaccid. I did not, in any of them, observe unusual heat, and from theory, should not be able to account for such heat as a result of strychnine poisoning. I have no theory at all satisfactory to myself, as to the manner of death from strychnine. I have seen Mr. Harley’s theory, yet can not see clearly how all the phenomena can be accounted for in accordance with his views. My own opinion is, that the manner of death is not yet fully understood. The origin of animal heat is not well understood. Condensation and chemical

action are both accompanied with the evolution of free caloric; and from these processes taking place in the body, it is generally supposed heat is derived. Both these processes take place in the lungs during respiration, and I should be unable to account for unusual heat in the body during a disease which excludes from the lungs a large portion of air usually furnished to them. Strychnine is intensely bitter to the taste—more so than any other known substance—leaves a persistent bitter taste on the back part of the tongue and faucies. Think no one could swallow it in solution without experiencing the sensation of intense bitterness. Think it could not be taken in a spoonful of liquid, and disguised; nor in a cup of coffee, nor in Epsom salts.

Involuntary micturition was present in all the animals to which we gave strychnia. In females, the stream of urine would be thrown off with considerable force, completely emptying the bladder.

In poisoning with strychnia, the intellect is usually clear. It is so in other forms of tetanus. Indeed, I believe unclouded intellect ordinarily attends all forms of tetanus, however induced. I do not understand that it is peculiar to strychnia. I can not say definitely what is a fatal dose of opium. Two grs. is a large medicinal dose, and when we go beyond that, we are approximating dangerous doses. I should not give or take six grs. of opium in the absence of disease. I have seen one case of traumatic tetanus. Sensitiveness to slight external impressions, is common to all forms of tetanus, and is due, of course, to the super-excited condition of the nervous system. After tetanus is induced, I do not think I have any landmarks by which I should be able to distinguish between idiopathic, traumatic, and poison-tetanus. I mean during the spasms. I think, taking the whole history of the case, an intelligent physician would ordinarily arrive at a tolerably correct conclusion. Opium sometimes produces tetanic convulsions. A case of morphia poisoning came under my observation during the last summer. A young lady took, through an error in the judgment of her nurse, about two grs. of morphia. No narcotic symptoms were developed, and indeed no symptoms of any kind, for about 14 hours, when she was seized with well marked tetanic spasms. There were two or three spasms, and during their continuance, the patient rested on her head and heels.

To ascertain the solubility of arsenious acid in laudanum, I set

aside in my office, in one vial, $\frac{1}{8}$ of a gr. of the acid in one drachm of laudanum; and in another drachm, $\frac{1}{16}$ of a gr. These I agitated daily for one month. The acid did not dissolve fully in either vial. I analyzed ten portions of the horse medicine—one drachm each time. I found that one drachm of the horse medicine contained $\frac{3}{8}$ of a gr. of arsenious acid—doubtless a part of it in suspension. I measured the spoon from which Mrs. Cole took her medicine. It held $1\frac{1}{2}$ drachms. This spoonful of the horse medicine would, therefore, contain $\frac{9}{16}$ of a gr. of arsenic. The smallest fatal dose of arsenic of which I have any knowledge, is a little less than two grs. Should not think $\frac{1}{2}$ a gr. of arsenic and $1\frac{1}{2}$ drachms of laudanum, a safe dose. Certainly should not like to take it.

Dr. Hamilton brought into my office a vial of laudanum and arsenious acid, mixed in such proportions as to resemble as nearly as possible the horse medicine. I agitated this thoroughly, poured off a teaspoonful, (the teaspoon from which Mrs. Cole took her dose,) allowed it to subside, poured off the laudanum and dried and weighed the residum, and found I had thirteen grains. Less than two grains is a fatal dose. Arsenic usually begins to operate in about half an hour after being taken, though circumstances may greatly vary this. It has taken effect within ten minutes, and its operation has been delayed ten hours. Death is ordinarily produced in from eighteen to thirty hours.

Tetanus produced by a wound is called traumatic, and is supposed to result from irritation of the nerves of the wounded part. I see no reason why arsenic, by irritating the nerves of the alimentary canal, may not produce tetanus as its first symptom, and the books teach that such is the fact. The symptoms of arsenical poisoning are not uniform. Indeed, there is almost no symptom to which diseased flesh is heir, that may not sometimes be produced by arsenic. I do not know what symptoms would be produced by arsenic and laudanum mixed in certain or uncertain proportions. I have no data upon which to form an intelligent opinion as to their combined action. When death is caused by arsenic the stomach and bowels are usually found inflamed, but not always. Nor is arsenic always found in the stomach. Fatal dose of arsenic ordinarily causes a diminution of the secretion of urine—sometimes an entire suppression. When a fatal dose has been taken the symptoms are no guide as to the size of dose. In arsenical poisoning there may be a remission, and even an intermission, varying in duration from a few minutes to a couple of days; and in a fatal case, if symptoms returned, I should

expect it would be with increased violence. I am not able to account for remissions or intermissions. So far as I know the fact is ultimate. All the authorities teach the doctrine and give cases, but none of them explain it. With our present knowledge it probably does not admit of explanation.

The first treatment should be to rid the system of the poison. I do not think coffee would have much effect upon a person laboring under the influence of a fatal dose of arsenic. It is no antidote, and would not impede the work of death except by sustaining a little longer the failing energies of the system. Epsom salts contain, as an impurity, ordinarily chloride of lime, soda or magnesia. By the action of the acid of the gastric juice upon this impurity, chlorine would be set free in the stomach, and from its known extensive range of affinities for organic compounds, it is possible oxygen would be liberated, which, in its nascent state, uniting with arsenious would convert it into arsenic acid, a more virulent poison. It is mere theory, upon which I do not place much reliance. Still if I were prescribing a cathartic under such circumstances, I should not order epsom salts with such impunity.

I examined the package of salts from which Mrs. Cole is said to have taken her dose, and found that it contained some form of chloride, as also did all the specimens of salts to which I had access. In analyzing the remains of Mrs. Cole we designed to proceed with the utmost care, so as to avoid every possible source of fallacy.

What do you say as to the possibility or probability of a female of feeble health, nervous constitution, and with a system peculiarly susceptible to the effects of poisons, having taken a drachm and a half of laudanum, with from two to six grains of arsenic, experiencing the following symptoms, to wit: Tetanic convulsions in three-fourths of an hour after poison taken, which continue more or less severe for from four to six hours, with remission of, more or less quiet, of from ten to twelve hours, with a return of convulsions and other distressing symptoms, and death in twenty-six hours? Might or might it not occur? From the known effects of the poisons, when taken separately in fatal doses, I see nothing improbable in the production of such a train of symptoms.

Cross-examined by Mr. Riddle—I never witnessed a violent poison produced from a dose of salts. In the examination of the muscle of the thigh, we continued in operation the Marsh apparatus as long as we obtained the arsenical mirrors. We tested the mirrors to determine that they were arsenic and not antimony. I could not

from the test made form a very accurate opinion as to the amount of arsenic in the body. The test determines the presence of very minute quantities. I do not pretend to say that we produced crystals of strychnia which I could declare strychnia from their form—I only said, or designed to say, that we obtained from animals a crystalline residuum, which, by the operation of the color tests we identified as strychnia. I do not say the color tests are infallible—we can say that with reference to very little of our knowledge, I am not aware that there are in all organized matter substances which produce with the same re-agents, the same color as strychnia. I should rather have material to make more than one color test; still if the changes of color peculiar to strychnia were produced perfectly and distinctly once, I do not know why that should not be regarded as conclusive. I made experiments to ascertain if the taste of strychnia would be disguised by mingling it in solution with Epsom salts, and found that it could not be thus disguised. I never said that the taste of strychnia is disguised by salts—I have heard such statements from others, and made my experiments to satisfy myself of their accuracy. I cannot say what symptoms would result from the exhibition to a delicate female of a drachm and a-half of laudanum with from one to three grains of arsenic. I have no premises on which to base conclusions, and should rather be excused from theorizing upon the subject. They do not chemically combine to form a new compound. One laboring under the irritating effects of arsenic would bear larger doses of opium or any of its preparations, than when free from disease.

I know that the exhibition of Dovers powders produces effects quite different from the effects of the materials of which it is composed, when given separately, and though I have an idea as to what symptoms would usually be produced by arsenic and opium, given separately, I cannot, by analogy or in any other way, determine what would be their combined effects.

The animals we poisoned with strychnine, were not thirsty. They manifested an inclination to avoid water before there was rigidity of the muscles, which would prevent their drinking. I do not know—and never said I did—that strychnia is not decomposed in the tissues of the human body. Think Taylor, in his review of the Palmer case, advocates that theory.

Question. After the second disinterment of Mrs. Cole, (which was conducted by Dr. Hamilton,) and when the remains had been brought to Chardon, did not Mr. Forrest, as one of the attorneys for

the State, propose to you that the analysis should be conducted by Dr. Hamilton and yourself, but that the result should be verified and witnessed by a chemist procured by the State? He did not. Dr. Hamilton brought away a large quantity of material, with the expectation that it was to be divided with the State. During the negotiations between Mr. Forrest and Mr. Thrasher, pending this division, I visited Mr. Forrest's office. He did propose that the analysis of the material should be commenced by us, and when the State had decided whether it wished for part of the remains, he asked a promise on my part that the material, in whatever condition it chanced at the time to be, should then be divided with them, if they desired it. I told him that no chemist would surrender material in such condition, and none would consent to receive it; that results so obtained, would be second hand and unsatisfactory.

Do you state upon your oath, that in Mr. Forrest's office, and in the presence of Mr. Canfield, he (Mr. Forrest,) did not propose to you that the State be permitted to procure a chemist to witness the result of your analysis? I do so state most unequivocally, and I say further, that, had such a proposition been made to me, it would have been declined. Our investigations were made by procurement of Mr. Thrasher, and the results were his property. I should have had no right to divulge them to the State's chemist, or to anybody else.

Was not the fact that your investigations were to be kept secret, made by Mr. Forrest the ground of objection upon which he declined altogether to have anything to do with the remains? It was not. (Mr. Thrasher here read the letter written at that time to himself, by Mr. Forrest, in which he (Forrest) bases his declension upon other and entirely different grounds, and never so much as refers to the fact that the results of Hamilton and Mixer's investigations were not to be disclosed until the trial of the case.)

Did not all the animals, poisoned by you with strychnia, have spasms? They did. Was there not present with all of them, extreme sensitiveness? There was. Did they not all have lock-jaw? They did. Well, then, when you say that difficulty of breathing was the only constant symptom, how are we to understand you? I did not say that difficulty of breathing was the only constant symptom. I said it was the most prominent symptom, and said also, in substance, that if any symptom was PECULIAR to, diagnostic of strychnia, I thought difficulty of breathing that symptom.

Re-examined by Mr. Thrasher. I confess I was surprised to learn

that a man so eminent in the profession as Dr. Taylor, had verified the truth of the doctrines advanced in his writings upon the subject of strychnia, by experiments upon such a limited number of animals. Dr. Christison regards taste as the most reliable test for the presence of strychnia. I do not understand that the reactions of strychnia and morphia are the same in any case. Nitric acid reddens morphia, and also brucia; and the ordinary strychnia of the shops, contains brucia. But nitric acid does not redden strychnia, and no one uses it as a test for that poison.

NINTH DAY.—THURSDAY, NOVEMBER 25.

Dr. Mixer recalled.—Examined by Mr. Thrasher. Upon reflection, and consultation with my associate, Dr. Hamilton, I am convinced I was in error in stating, that from the muscle of the thigh of Mrs. Cole we obtained only five or six mirrors. I now recollect that we used but half the muscle at a time, making ten analysis, and from each portion we obtained five or six of the arsenical mirrors. There was a livid appearance of the tongue and lips in the dogs, to which we gave strychnia. I did not observe with reference to this in the first two or three, but in the later ones this was very apparent. It was manifest very early, as soon as difficulty of breathing came on. With some of the dogs there was spasmodic closing of the jaws, alternating with relaxation, producing an almost constantly recurring snapping noise. During the general spasms, the jaws were locked and still.

Cross examined by Mr. Riddle. In testing for strychnia, I did not make use of the physiological test. I have confidence in the test. In it we rely upon symptoms.

The case was elaborately argued by counsel, the argument occupying two and a half days. Having been twelve days in progress, the case, under charge of the Court, went to the jury at 3 o'clock, on Saturday, November 27. On Sunday morning, having been out thirteen hours, the jury returned a verdict of "not guilty," and the prisoner was discharged from custody.

A Case of Gun Shot Wound. With remarks by H. CULBERTSON, M.D.

On the 6th of February inst., six hours after the accident, I was called to see Norvill Speed, a healthy young man æt. 18, of nervo-lymphatic temperament, who had, while sporting, accidentally shot himself in the abdomen. The wound presented all the characteristics of a near-wound inflicted by small shot—was five inches in length, and two in breadth, the orifice of entry the size of a quarter, three inches below the umbilicus, and two and a-half to the right of the median line. The wound laid between the superficial fascia and the adipose structure beneath the skin, its superior extremity reaching the median line, so that its direction was up and across from right to left. When the accident occurred patient had on two shirts, a pair of drawers and trowsers, all of which were perforated by the shot. On probing the wound carefully could feel no wadding or clothing. He presented the following symptoms: mind rational, is hopeful, general surface pale and cool, extremities cold, no pain, feels weak, pulse seventy-six, small, soft and weak—has twice vomited bright red blood, to a large amount, in the clots of which were found three rough and flattened shot. No discharges from external wound save a little blood. Has micturated with pain, but urine contains no blood.

Diagnosis. Gun shot wound between the integument and superficial fascia, and of the middle of the stomach.

Nature.—The dense superficial fascia favored by the nearly vertical position of the gun when discharged, has been the means of causing the lead to glance up beneath the skin, until by the resistance of the adipose structure, the wadding and cloth, with the shot behind, were impeded in progress, and some of the flattened shot passed into the stomach, producing, probably, an incised wound of that organ. It is doubtful whether the bowels are wounded.

Prognosis.—Unfavorable, but still encouraged the family, saying “it might turn out well.” Indication of cure—To prevent further bleeding, and bring on a moderate reaction.

Treatment.—A tight abdominal bandage and compress beneath, with an opening at seat of external wound—an oil-cloth over the entire abdomen, and on this cold water dressing—external wound

dressed with lint—grain doses of pulv. opii every three hours, and if pain requires, more frequently. If sleeps, not to be troubled—no food. Water in tea-spoonful doses every fifteen minutes—no visitors—dark and cool room—perfect rest in recumbent position.

Feb. 7th.—Since my last visit, has slept several hours—has no pain or fever—very little thirst—no discharge from wound—moderate reaction—pulse 100, irregular, and more full, but still soft.

Indication to keep down reaction by cutting off the nervous sympathies, thus preventing the presence of an undue amount of inflammation, also to keep the bowels in check, by larger doses of opium.

Treatment of yesterday continued.

Feb. 8th.—Has slept several hours since yesterday. Has no pain—very little fever—no thirst—micturated without pain—urine scanty and high colored—some pus on edges of external wound.

Indication of cure the same. Treatment—Applied a new abdominal bandage—enjoined rest, absence from food, and allowed but little water. To continue cold water dressing, and opium as above, unless asleep.

In the evening heard the patient had vomited once, throwing up bile, and also that he complained of some soreness around external wound. The other symptoms as formerly. Treatment continued.

February 9th. Symptoms still about the same ; complains of some motion and soreness of bowels, no vomiting to-day, has expectorated some mucus, *but not colored with blood*, sleeps well, pulse 84, somewhat hard.

Treatment. Continue opium as occasion may require. Ant. Tart. in solution gr. one-tenth every three hours, with direction to cease giving it if it produced too much nausea or vomiting—other measures as before—still no food.

February 10th.—Symptoms still improving; no pain, fever or thirst; slough commencing to separate at external wound; pulse 76 and softer; has not vomited; does not require so many powders; sleeps well; tongue coated with white fur; is hungry. Treatment—continue powders occasionally and Ant. Tart. every three hours in same doses; apply bread and milk poultice to external wound: continue bandaging and cold water dressings. Gave as food and drink muc. gum acacia in table spoonful doses every half hour.

REMARKS.—I notice that the inflammatory process has developed the presence of shot beneath the skin, but do not yet feel any wadding or cloth.

On the 11th his pulse was 72, natural. Gave nothing but a pow-

der of opium, discontinued antimony and continued the other means. The urine is more copious, and loaded with urate ammonia. Gave for food, milk diluted one-half with muc. gum acacia.

12th.—Symptoms much the same, except that he complains of some soreness of bowels and external wound; pulse 68 and natural. A dark serous discharge, colored by the gunpowder is coming away from the wound. Treatment continued.

13th.—Symptoms much as usual; pulse 76, natural. At the upper extremity of the wound can feel a hard body. This I suppose is the wadding (brown paper) or a portion of his clothing. On pressing on track of wound there came out about half ounce of the above mentioned fluid, which contained some air bubbles. Took yesterday but two powders. Treatment—To take powders as needed; discontinue cold water dressings, continue poultice, and take sago prepared with water for food.

Remarks.—The indication to day is to remove the foreign bodies from the wound; but my forceps not being long enough, and after failing with a bent knitting-needle, I was obliged to defer this operation until I could make an instrument. I did not deem it proper to make a direct opening.

Feb. 19th.—From the 13th to this date the symptoms have gradually improved. Pulse ranging from 60 to 72.

On 17th had a free evacuation from bowels, slightly reddened by blood, brought on by an injection of salt and water. Thus he passed 11 days without defecating.

On the 14th endeavored to remove the wadding, &c., from wound, but did not succeed.

On 15th made a canula of German silver, in which slid a three-pronged steel wire, the points of which were sharpened and bent at a right-angle, and so arranged that by pushing out the handle the ends would spring apart and embrace the object, and on drawing back the handle, would close and hold it securely as the instrument was withdrawn from the wound. With this I succeeded in removing 8 shot, and all the cloth and wadding, except a small portion which seemed to be firmly embedded in the substance of the skin.

The microscope showed the material removed from wound to be cotton. The instrument referred to, has the advantage of not giving pain in manipulating, as is the case with forceps when the blades are opened and handles spread apart to secure the object. A hook is troublesome by catching in the sound tissues, besides not being efficient, and gives more pain than a large sized canula.

On the 15th, allowed some chicken once, and finding, on 16th, that it did not injure him, ordered it three times daily, as he needs food after his starvation.

On the same day, allowed him to set up fifteen minutes, which he has continued to do every day, gradually increasing the time.

The discharge now (19th,) is healthy pus, and granulations are springing up in the mouth of the wound.

From the 19th until to-day, (the 22d,) the case has progressed favorably, and will continue, I hope, to do so in future.

The case presents several interesting points:

1st. No one could determine in its early stages the exact amount of injury present. The bowels were not injured, neither the lungs or liver, as is shown by the sequel; yet there was good reason for supposing these organs might be.

2d. It affords another illustration of the fact that the membranous structures often cause the missile to take a new line of direction.

3d. When we consider the near proximity of the gun to the body, (only a few inches) it seem strange that no more injury was inflicted.

4th. I doubt whether there have been many cases of abdominal gun-shot wounds, of like character, so free from unfavorable symptoms.

5th. I would only mention the prevailing belief, that success in the cure of such cases, depends upon (so far as the physician's efforts are concerned,) the administration of large doses of opium, even although there is no pain, (for the remedy blunts nervous sensation,) aided by the lancet, antimony, abstinence from food, and the too fashionable exhibition of laxatives, and even purgatives.

6th. The wound of the stomach has probably healed by first intention, and there may or may not be peritoneal inter-union.

P. S. On visiting this morning, (23d,) I find that on the evening of the 20th, after much nausea, he vomited up about half a pint of dark blood, very firmly clotted, and passed black blood by the bowels, after which, he felt much relieved. This, evidently, was old blood, and no doubt its presence in the stomach not only prevented the flow of blood and fluids into the peritoneal sack, but acted as a shield beneath which the wounds of the organ healed. It (the clot) probably was held in situ by partial contraction of the stomach. His symptoms are still favorable.

ZANESVILLE, Feb. 24th, 1859.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

BINOCULAR VISION.—Of the thousands who gaze with delight upon the magical effects produced by that small instrument known as the stereoscope, how few there are who comprehend, or attempt to assign reasons for, the extraordinary optical illusions experienced through its instrumentality.

It is with the view of, in some degree, elucidating the principles of vision upon which these are founded, that the following article is written.

It will in the first place be well to consider the difference between monocular and binocular vision. Nature has furnished us with several means of determining the distance of objects which may happen to come within reach of our visual organs. One is that of distinctness ; a greater or less degree of which—other things being equal—gives an idea of greater or lesser distance in the object viewed. The second is through the change of focus required in the lens of the eye in refracting to a point on the retina, rays of light entering it with a greater or lesser degree of parallelism, thus producing in the brain a consciousness of unequal distances in the objects from which they emanate.

The means above alluded to, it is evident, are enjoyed in almost the same degree, when viewing with one eye as where both are used.

By far, however, the greatest power with which nature has endowed us of discriminating distances, is through the agency of binocular vision ; or in other words, in the sensation produced in the brain by the different degrees of convergency of the optic axes required in obtaining distinct vision of the differently distant points of objects upon which they are directed. It is to this faculty that we are indebted for our most palpable evidence of differential distances and for that consciousness of solidity and relief so remarkably experienced in the stereoscope.

It is evident, for example, when we are looking at a house or other object that has depth as well as breadth, from such a point of view as to enable us to see two sides of it at once, that we receive a differently perspective image upon the retina of either eye, or that we must see more of one side and less of the other with the right eye than the left, or vice versa. Thus accomplishing with one view what a person with but one eye would require two views at positions two and a half inches apart—the distance between the eyes—to accomplish. These are the different perspective views of the stereoscopic cards, and it is the effort to reconcile these dissimilar pictures by converging the optic axes at points differently distant from the eyes which produces the wonderful effects above alluded to, and which enables us to experience all the sensations of delight

which would be produced by the contemplation of the landscape itself.

The stereoscopic pictures will of course never quite correspond. They are taken simultaneously with a camera constructed with two lenses, or consecutively with a camera with one movable lens.

The lenses of the stereoscope, besides magnifying the pictures, are so placed as to unite certain similar points of them, thus relieving the eyes of too great effort by uniting them entirely by convergency of the axes.

The means above alluded to, by which we are enabled to judge of differential distances, are of course much diminished by the distance that the objects viewed are removed from us.

Our consciousness of different distances by distinctness is diminished through decrease of light.

Our judgment, through change of focus, is diminished in consequence of the parallelism of rays from distant objects being so nearly the same as to require but little change in refracting them to a point on the retina. And lastly, the binocular effect is in a great degree impaired through the identity of distant views when seen from positions only separated by a base of two and a half inches.

Nature has thus observed her usual economy in providing for our necessities alone. It being of little comparative importance to us generally, to be acquainted with the relative positions of distant objects, whereas our personal convenience and even safety depend greatly on our knowledge of those near at hand. We are therefore provided with much more ample means of determining the latter than the former.

It may not be out of place here to allude to another subject immediately connected with vision.

Sir David Brewster says, in allusion to the cause of erect vision from an inverted image, "That it has long been a problem among the learned." And further remarks, "That it is perfectly explained by the law of visible direction." Now, although it is evidently a consequence of that law, the question arises, why should we see objects in a direction perpendicular to the retina at the point where their image meets it?

In truth, it is one of those facts that requires no explanation, as there is nothing inconsistent or irrational in it.

There is no more reason that an inverted image should give us the idea of an inverted object, than that the reverse should be the case, or that it should give the idea of a horizontal one. There is no unity necessary between the direction of an object and the direction of its image upon the retina. Nature has so associated impressions upon the retina with impressions on the brain, that an inverted image on the former is evidence of an erect object to the latter. And we have no consciousness of anything to the contrary.

—*Jour. Frank. Ins. Dec. 1858.*—*Jour. of Pharmacy.* W.

Francis' Introductory.

The annual course of the winter session of Clinical instruction at this great Charity of New York, was opened on the 18th of October, 1858, when the introductory lecture to the several courses of clinical illustration and practice was delivered by John W. Francis, M. D., LL. D., the President of the Medical Board, in the new and spacious operating theatre recently finished. The discourse was delivered to a crowded assembly of medical men and students of medicine, many from the remotest parts of the Union, and was received with deserved approbation. It embraced among much matter of a collateral character, a history of the origin and progress of anatomical preparations, and illustrations of the estimation in which the art was held, and its continued importance from the time of Swammerdam and Ruysch, of Holland, down to the latest period of science. We extract from a portion of the discourse a brief selection of occurrences, including the times of the Hunters, down to the transactions of a like nature in New York, and in some of the other institutions of the republic. We have learned that this address, at the request of the students, is about to appear entire from the press :

Pregnant with glory as are the annals of British medicine and surgery, and enduring as must be our gratitude for the advancement our profession is admitted to have received from English science, there are two names that stand above all others of that empire to whom must be awarded a special pre-eminence for their labors. I allude to William and John Hunter. As anatomical and physiological pursuits are now conducted, we are compelled to revert to these great men as the most successful explorers of the human structure during the march of modern improvement. Their lives have been amply written, and at a future time you may enrich your memories by a perusal of their achievements. Notwithstanding the advances recently made in the same subjects of inquiry which once summoned their close attention for years, their writings are still perused as every-day books. Rigid dissection and minute anatomy are the grounds upon which their merits rest ; and seldom, indeed, in this our own time, does much controversy arise out of their revelations. While living they met opposition enough, but the arguments, *pro* and *con*, have settled in the conviction that an almost Baconian accuracy characterizes their deductions. This is especially the case with the writings of William, the elder brother. His 'Anatomy of the Gravid Uterus' is the rock upon which his fame rests. No subsequent writer has attempted to rival it, and though contentions have sprung up as to his account of the *membrana decidua et reflexa*, I am satisfied by ocular proofs of his preparations, that he had the best reasons for his description.

His minute and elaborate work was the result of twenty-five years' labor. I cannot speak of his other writings on this occasion. He was every inch of him a philosopher. Of John Hunter, his writings announce the originality of his mind : he was a practical sur-

geon ; as a deep physiologist and pathologist he did more than even his renowned brother, and his name is consecrated in the history of medical transactions. But I must not usurp the duties of your teachers. I must leave to Dr. Mott, and to Dr. Van Buren, to Dr. Dalton, and Dr. Metcalfe, and Dr. Clark, and your other instructors, the task of specifying his merits. With little learning, but an untrammelled intellect, John Hunter discovered, with wonderful acuteness, unsuspected truths, and his reflections were marked by a rationality which generally led to the strongest convictions. What raptures must have filled his soul when he saw that his discoveries had secured a deathless fame. How he must have revelled in the luxury of genius. He was poor, but were not his possessions greater than those of emperor or king, and could he not, in defiance of worldly pomp, exclaim : "My mind to me a kingdom is?" He had spent more than ninety thousand guineas in anatomical investigations. Garthshore, one day entering his museum, and finding him busily engaged, exclaimed : "Oh, John, you are always at work." "I am," replied Hunter ; "and when I am dead you will not soon meet with another John Hunter." His copious volumes are full of practical import. He was a mighty reformer in surgical doctrines, and in physiological and pathological principles. He was of no school. He was nature's interpreter. I can hardly say in how many branches of our art he was an innovator and discoverer, as well in comparative anatomy as in vegetable physiology. He profoundly investigated the nature of life and the origin of disease. He passed almost an entire ten years, at one period, in the dissecting room, sometimes aided by Cheselden, sometimes by Percival Pott. Abernethy delighted to recount stories of his peculiarities, to which I have repeatedly listened ; of his provoked mind, from a want of command of language, correctly to set down his thoughts ; and of his determination to allow himself but four hours sleep at night, while after his dinner he generally took a siesta of some two hours, though the books, said Abernethy, affirm only one ; and this plan was adopted in conformity to his physiological laws, that digestion was a great function, and demanded repose.

He who would know how liberally the Hunters appropriated their hard earnings of professional life, and the incredible amount of good they accomplished for the advancement of medical knowledge, will profit by their biographies, and reverence both the heads and the hearts of these illustrious men. Like the Bernoulli in mathematics, they have earned an immortality of fame. Their claims to the regard of posterity are unbounded. From humble life and extreme obscurity, they were by individual effort raised to the highest eminence in the scientific world.

Their reputations, however, do not depend upon biographical facts, nor even on their precious writings ; these, indeed are accessible to all, and all may grow wiser by them. They have left the monuments of their renown, erected by their inflexible perseverance, in the great collections which they formed of anatomical preparations, and as these are open to the inspection of the world, the

Hunterian Museum in Glasgow and that in London will speak in louder accents in behalf of their founders than the eulogy of the warmest friend, or the most erudite mind.

Sir Everard Home has published quartos descriptive of the Hunterian collections. As these museums are objects of inquiry to all travelers, I, of course, could not forego the pleasure of a sight of them; they, moreover, fell within the scope of my professional business. To examine them with profitable results, would have demanded months, nay years. Even a partial survey strikes the beholder with wonder at their magnitude; and their exquisite beauty and perfection almost discredit the idea that they are the work of mortal hands. Wherever there was life, Hunter sought out its organization, the better to unfold its phenomena. He stands alone. Were I to estimate him by his genius and his studies, I would not hesitate to class him among astute theologians, so sublime were his pursuits, to vindicate the ways of God to man. "To prove an intelligent Creator," says Archdeacon Paley, "I take my stand in human anatomy."

From the monad, or primary molecule, to the perfect formation of the mature being, all is illustrated; the most minute specimens of sound and morbid anatomy are brought to view, and every article arranged in its relation with the laws of organic life and development. Here, I repeat, the man of research will find every specie of animated being, or link in organization, from the humblest vegetable to organic man. What a revelation of created wisdom is thus unfolded! All—all the work of two individuals. What devotion must have inspired John Hunter—what seclusion from the world and its gaities must have reigned within his mighty bosom, so to absent him from society, in order to seize time for his vast work. I again repeat, the soul is penetrated at the sublime manifestations which weigh upon the heart by an inspection of these collections.

There are those who have compared the labors of John Hunter to the Principia of Newton, and of the number who have uttered this language is the late Joseph Adams; but this is going too far. There are others, composed of the baser materials of our natures, who with malign intent, have denied his services, and dwelt upon his unlettered cultivation; precisely after the manner that James Watt was pronounced to have done nothing for the perfection of the steam-engine, or Fulton to possess no merits in steam navigation. I will not insult you by recording the names of such miserable detractors; the poverty of my diction permits me not to characterize them better. Let Stygian darkness ever cover them even if they escape the vengeance of heaven. It was, doubtless, too much for Hunter's miserable opponents to endure, when the world rang with John Hunter's praises; as they could not secure to themselves the penalty of celebrity, nothing was left them but to imitate the owl who, we are told, declares the eagle blind. Hunter, though of an irritable temperament, with many struggles, endured all, conscious of his deserts. Tell me if any of you have, at any time, read either in fable or in his.

tory, that the elephant ever complained of the too great size of other animals

The history of all art, the history of every science, yields this instructive truth, that great discoveries are, after all, the issue of preceding investigation; it is step by step that our art, in many hands, and by the workings of many minds, has arrived at its present exalted state. Read Bracker or read Whewell, you will find this fact abundantly verified in the history of philosophy: a partial exception may perhaps be found with Sir Isaac Newton on optics; and in the case of John Hunter it would seem that by an intuitive sagacity he at once seized upon essential principles not dwelt upon before, and disclosed to our comprehension new laws of organic life, and new curative means of relief. When Dr. Pearson led me to the apartment of St. George's Hospital, and pointed out the place where Hunter fell dead, with a disease of the heart, I felt as though I stood on a consecrated spot. Don't you think, after all, that his death was noble; he died vindicating the rights of a student. He possessed an impetuous nature, but he had the tenderness of genius.

The world has produced but one Aristotle, one Bacon, one Newton, one Franklin, one Washington, one John Hunter, men who have individually demonstrated what special acquisitions in assigned services may accomplish. Let us at all times, with charity, tolerate diversity of opinion, but let us unite in one sentiment, that John Hunter stamped the impress of original powers on the noble art of healing, and enlarged the sphere of its benefits. We may further affirm, that the acute mental perceptions of John Hunter, by the appropriation of his vast gifts, have given us, in his museum, a book of wisdom, which, like the inspired volume, may be deemed an emanation of profoundest thought, and which has taught man how fearful and wonderfully he is made; that only a Divine Architect could have been his creator; and while it admonishes us that the wisest provision is made for his proper continuance, tells us his economy is neither to be molested by the presumptuous, nor tampered with by the ignorant unacquainted with its mysterious harmony.

These few reflections on these great museums bring forcibly to my recollection the gratification I experienced, through the courtesy of the anatomical professor, from an examination of the collection of preparations of sound and morbid parts, in the College at Dublin, in 1816, brought together chiefly through the zeal and talents of Macartney. Next, I think, to those contained in the museum of the Hunters, they exhibited the nearest displays towards perfection in artistic manipulation and soundness of preservation. Macartney was long an efficient aid in St. Bartholomew's Hospital, with Abernethy, and the translator of Cuvier's *Anatomy of the Brain*.

Whether this address, prolonged beyond the limits of my first intention, has inspired you with the importance of anatomy, and in the right means of acquiring a knowledge of it, by dissection, by the use of the knife, the forceps, and your own faculties of observation, is the secret of your own bosoms. I might go much further to point out the value of dexterous manipulation in the dissecting room, pre-

paratory to the skillful display of chirurgical tact in the sick chamber, were I to adduce other illustrations of the exalted condition of surgical anatomy and pathology, as it is recognized at the present day, and cultivated in Europe, and in our own country. But the question is no longer debatable. You have, very lately, a triumphant specimen of the results of labor and talent in that field in the works of Dr. Gross, now a distinguished professor in Philadelphia.

Leaving then the subject, treated indeed but very imperfectly, I shall close with a few scattered observations on the history of anatomical preparations in the United States; so far only, however, as to impress you with the fact that something has been accomplished among us, and that the ardor which now presses forward the pursuit must effect results prolific of lasting benefit.

In a recent lecture I gave you some particulars derived from our early Dutch records, of a post-mortem examination of the body of Slaughter, the English governor of New York. This occurred as early as in 1691. It is the first autopsic examination that ever occurred in the American colonies. The governor, it was affirmed, had died by poison, but no proofs of that nature could be derived from the doctors' post-mortem testimony. The fact is, the governor died from a debauch; and it doubtless furnished the Dutch faculty with a gratifying spectacle to exercise their functions over a worthless ruler, whose moral and political life was at variance with the ethics of the good old burgomasters, and whose inebriation proved to be the death of the patriotic Leisler.

The earliest anatomical dissection for imparting medical knowledge was performed also in this city, on the body of a convicted felon, Hermanus Carrol, by Doctors John Bard and Peter Middleton, in 1750. Only two years after there arrived from Scotland, William Hunter, at Rhode Island. He was a near relative of Wm. and John Hunter. The emigrant Hunter was now only twenty-three years old; but he had studied with the elder Monro, and at Leyden. He gave lectures at Newport in the year 1754, '5, and '6. They were reported to have been of a high order of instruction. He was long a prominent practitioner and a bold surgeon; he died in 1777. Hunter's lectures were, doubtless, the first regular course of practical anatomy founded on dissections taught in America. We have no means of knowing what might have been the contents of his museum, as his library and other effects were dispersed by the revolutionary struggle.

There is a name in the English history of anatomical preparations most conspicuous and familiar to all who are acquainted with the biographies of Monro secundus, William Hunter, Morgagni, Mead, and others. I allude to Dr. Frank Nichol. He was born in London; had visited the schools of France and Italy; was graduated at Oxford, and finally became one of the physicians of the king. It was during the middle of the eighteenth century that he signalized himself by making fine and highly finished preparations, which attracted the attention of the faculty. I mention him specially, because a portion (I can not tell to what extent) of his great collection of

injections was given by his son, a member of the British parliament, to Ward Nicholas Boylston, of Boston, for Harvard University; but the year is not specified. As Nichol died in 1778, it must have been nearly at the close of the century. I have often heard Samuel Bard and Wright Post talk of Nichol's talent in that vocation.

A collection of preparations illustrative of some points in sound and morbid anatomy, found a location in Pennsylvania, for the Philadelphia school, about the same time, the gift of the late Dr. A. Chovet. This incipient movement to establish a museum of anatomical preparations in the great medical school of Philadelphia, we are told, has been followed by many distinguished laborers in the honorable work within late years; and, if report deceive us not, the enterprise of Dr. Goddard, and the capacity and zeal of that remarkable man, Dr. Leidy, have already given exhibitions of skill in that peculiar line of scientific and artistic power, which held out to the profession lasting results of highest value to anatomical knowledge.

An effort of no ordinary character to create an anatomical museum for the college of New York, was made by the late Dr. Richard Bayley, of this city. What attempts of that nature had been made by his predecessor in the medical school established in 1768, in which Dr. Clossy was appointed professor, we cannot affirm with accuracy. A portion, however, of what had been collected, as well as a portion of the labors of Bayley, were destroyed by the Doctor's Riot, which took place in this city in 1788. The imprudent exposure of a limb by the students, excited the populace; the mob broke into the building, the New York Hospital, where they found Bayley's valuable cabinet, which they forthwith heaped into carts, carried out, and triumphantly burned. Little was left; but to that little, the able Dr. Wright Post added specimens of his own skill; the collection was afterwards enlarged by additions imported by Dr. Post, and with awaked zeal, Valentine Mott, Henry W. Onderdonk, John Van Buren, and Guy Carlton Bayley, and others, increased the number. This valuable collection is now in the possession of the College of Physicians and Surgeons of this city, and I must refer you to Professor Willard Parker, for more minute details concerning a museum, the result of many minds and many hands.

At the time I first began my medical pupilage, there arrived among us, a Dr. Alexander Ramsey, who bore the repute of a distinguished lecturer on anatomy. He had studied with Cruikshank, of London, and was famed for his anatomical preparations. He was chosen to deliver a short course of lectures on anatomy and physiology, in Columbia College. Of his professional knowledge there could be no doubt; but his grotesque person, his unbounded vanity and hauteur, his arrogance and pomp, excited the risibles of the whole class. Crooked back, with neck scarcely half an inch in elevation, with a head of huge dimensions, arms lengthened as if of the simia tribe, and person not five feet in height, he seemed created by nature in one of her whimsical moods. He was ever illustrating the harmonies of creation by reference to his own symmetrical development, and to the philosophy taught him by his master, Cruikshank.

His career was short among us, but some of the old doctors, still flourishing, must retain a recollection of him. He was called at times the Calaban of science. The ridicule which he provoked while teaching, forbade the acquisition of much information by the students. Yet even this Scotch lecturer, in some degree, aroused attention to anatomy, and as some of his preparations of the absorbents and of the heart, were deposited here, he may be said to have promoted our special study. Ramsey had adopted the notion that the bite of the rattlesnake was rendered innoxious by alkalies; an opinion sustained by Ramsey, of South Carolina, our old friend Dr. Mitchell, of New York, and by others who adopted the theory of the acidum pingue of De la Boe. Ramsey was adventurous enough to test the theory by an experiment on his own person; he allowed himself to be bitten—contrary to the usual action of that poison, he lingered in suffering, and finally died.

The making of anatomical preparations by the students of our rival medical schools, the occasional importation of specimens of singular value, from Europe, the broad and convincing fact that anatomy is the groundwork of a surgical and medical education, have caused the production of many precious displays of the art in these our own days. The great chirurgical achievements of the profession in this city, for the last twenty or thirty years, and the value of such evidence of patient study set forth by the teachers of our respective schools, have contributed largely to promote the strongest desire in the student to excel in such labors; and our leading men who assume the proper instruction of students, now very generally aim to be furnished with museums more or less ample.

A fact strikingly illustrative of the general desire to found museums of this nature as important adjuvants to the several branches of instruction in the medical art has been most happily evinced by the clinical faculty of our venerable and venerated New York Hospital. I have intimated that at an early day the salutary work was commenced; the public disasters of the times, however, arrested the undertaking, and it is only within the past few years that renewed efforts have been made for its accomplishment. The foundation is now laid; the work in progress, and it is conceded by all, promises to fulfill the highest expectations. An institution like the New York Hospital cannot fail to furnish materials of most instructive import for the great design; the quotidian laborers of that vast charity must supply specimens profitable to student and professor; her long list of surgical worthies recognized in Cheesman, Post, Buck, Watts, Watson, Parker, Van Buren, Sabine, give confidence that a museum of rare acquisition will ere long add further means to those already secured for elucidating clinical science. I am informed that the immediate conservators of this new collection are Dr. Agnew and Dr. Bayles.

I was not indifferent to this department of knowledge during my twenty years' services as Professor in the College of Physicians and Surgeons and in Rutgers' Medical College. The collection I formed during that period might claim notice from its extent and the nature

of the preparations. I had gifts, I purchased, and I prepared. The phenomena of death by lightning, by the drinking of cold water when overheated, cases of death by sun-stroke, instances of poison, yielded specimens of singular value ; and as medical witness for nearly seven years in our courts of oyer and terminer, I was compelled in all criminal cases to ground my report on autopsic examinations. In obstetrical knowledge I had much of interest, in illustration of changes and infirmities of the uterine system. This collection is now transfered to Geneva College, an institution of rising importance as a medical school.

From want of time, I shall forbear to dwell upon the collection of preparations illustrative of surgical cases at the hospital at Ward's Island under the direction of the able surgeon-in-chief, Prof. Carnochan, and the valuable collection of your surgeon, Dr. James R. Wood, of the Bellevue Hospital. The display of anatomical skill and surgical prowess which Dr. Wood's collection presents aided by Dr. Gouley and others, will in the course of the season enlarge your minds with principles confirmatory of what I have advanced in this lecture, and say more in behalf of the zeal and ability of your teacher than any words can express. Proofs of such skill yield more satisfaction by illustration and example than the most elaborate disquisitions.

I shall close these casual remarks on the history and progress of anatomical preparations with an observation or two on the publication which within a few days past has been generously distributed among you by the venerable Professor Valentine Mott. The devotion and life-long labors of this great practical surgeon and teacher are familiarly known to you all. Nothing but anatomy—surgical, topographical, minute anatomy—could ever have secured the mighty triumphs which enshrine his name. He had received a sound education, and had graduated M.D. at Columbia College in 1806 ; but he was not satisfied, and repaired to Europe for a residence of nearly three years. He became a pupil of Henry Cline, of Astley Cooper and of John Abernethy, and from this unadulterated fountain-head he derived that knowledge which has rendered him the contemporary and the legitimate successor of those master minds. As he had wisely repaired abroad for that information which at the beginning of his professional career could only in part be obtained at home, he became enriched with that wisdom which opportunity, labor, study, self-denial and perservance alone can give. His reputation as a student was announced to his countrymen ere his return among us. In the spring of 1810, he issued a notice of a course of surgical lectures which I, a young student had the gratification to hear, surrounded by many of the old practitioners of medicine. In the fall of 1810, he enlarged his plan, and the Professorship of Anatomy and Surgery, held by Dr. Wright Post, being divided, to Dr. Mott was assigned Surgery. Now it was that chirurgical science was taught as a distinct course in this country, and the talents and acquirements of this young professor demonstrated that his credentials in behalf of his high promotion justified the ample confidence the

trustees of Columbia College had cherished. You will thus see that for nearly half a century Dr. Mott has filled the responsible trust of instructor of chirurgical knowledge in this city. No other individual in the country has been thus employed for so long a period; no other teacher in the land has discharged the great duty with such vast benefits to the public weal. We must look to the army of youths whom he has indoctrinated to understand the merits of his prelections, and to the practical results which have flowed from the demonstrations of science and skill made manifest at his hand. I know that in the several institutions in which he has formed an integrant part he has been estimated at that consideration which superior merit alone attains; that the great art has been amplified by his inventive resources and his indomitable zeal; that the annals of American surgery are fertile of his great improvements; and that his name can never be lost while philosophy honors her votaries, and while humanity cherishes the sympathies of our common nature. I devoutly believe that the preeminent consequence with which surgery is regarded at the present day throughout our wide republic owes much to his unparalleled career as its master, and that its now elevated superstructure rests mainly upon the strong foundation of his professional skill.

With peculiar satisfaction, therefore, I refer you to the surgical museum of preparations, an account of which has been published by Dr. Mott. Its treasures are mainly the fruits of his operative qualifications, illustrated by the ripe labors of fifty years; the whole collection, we are told, is almost altogether composed of specimens made from his individual cases of practice. I shall forbear any enumeration at present. Well may Astley Cooper have exclaimed, when hearing of the bold and intrepid operations of his American rival, "He has performed more of the great operations than any other man living, or that ever did live!" That great museum is accessible to every one of you, in its appropriate hall in the Medical University of New York.

Gentlemen: I will trespass on your patience no longer. I have appealed to your intellectual nature to acquire science as the legitimate and effective substitute for the overthrow of empiricism; and fortified in that possession, practice, as its associate, will prove the exponent of your knowledge. The struggle of professional life to secure success, demands the why and the wherefore, and the mastery of such reasoning is your great reliance. I think I have said sufficient to impress you with the conviction that in repairing here, you have come to an institution rich in substantial materials for elucidation; among men who drink from a living spring of active practical knowledge; and such men, according to Locke, are the proper instructors. Here is no stagnant pool; the slough of despond is not visible. It is for you to catch the life and spirit of the place and of its actors. I am done.—*New York Jour. Med.*

Academy of Medicine (New York.)

[We extract from the Herald, the following account of the proceedings of the meeting of the New York Academy of Medicine, held on the 19th of January. Like most newspaper reports of medical discussions, it is in some particulars probably defective, but the main statements—at least those of Drs. Beales and Mott—appear to be authentic, having their signatures affixed:—]

A meeting of the Academy of Medicine, of unusual interest, took place at the University last night. There has been a rumor widely circulated through the city for some weeks past that a well-known citizen—Samuel S. Whitney, Esq.—came to his death by malpractice at the hands of one of the most extensive practising physicians of the city. This report of course created a lively and wide-spread excitement. The probabilities of its truthfulness have been warmly discussed on either side. It was expected that the highest medical authority of the city would give an authoritative expression of opinion upon the subject last night—so there was an unusually large attendance of the members of the Academy of Medicine.

At half-past eight o'clock, after some special business had been attended to, the matter of the death of Mr. Whitney was taken up. The President invited Dr. Horace Green to make his statement of the case before the post-mortem examination was read.

The doctor stated that this unfortunate case was first presented to his notice on the 25th of October last. Mr. Whitney came in with the rest of his patients, and made two calls at his office before he saw him. His assistant informed him that the gentleman had called, but would not wait for his turn, and wished to see him at once; to which he replied that his rule in such cases should be adhered to, and that unless in case of a lady, the patients should wait their turn. Mr. Whitney then came in in his turn, and entered his name on the doctor's book, as all his patients did. He stated to him that he had been in ill health for two or three years, and that for the last two months had felt quite a bad cough, and he also complained of his throat and chest. He stated also that some physician had examined him before, and had told him that his lungs were affected. He (Dr. Green) then made an examination of his chest by auscultation, in the presence of his assistant, Dr. Richards, who, as usual in all cases which he examined, made a note of it at the time. He found the chest thin, a little depression on the left thoracic wall; percussion gave a flat sound over all the upper portion of the left lung. On applying the ear to the chest a distinct humid rale or click was heard below the left clavicle in both inspiration and expiration. These symptoms, when accompanying the signs, were indicative, in his (Dr. Green's) experience, of the presence of tubercular softening. Mr. Whitney's throat appeared granulated and inflamed, and the left tonsil was slightly enlarged and ulcerated; the epiglottis was thickened, and its border whitened with a line of erosion. The doctor then gave an account of the several interviews which he had

with Mr. Whitney from the 26th of October to the 4th of December, and his treatment on these occasions—the application of a solution of nitrate of silver to the fossæ, epiglottis, and into the glottis, and the use of the “probang.” The visits of the patient occurred at such long intervals that he found that the parts were not prepared for the introduction of the tube; but as Mr. Whitney had several times expressed a desire to have it used, he (Dr. Green) resolved, on the 6th of December, to make the attempt. The tube was, therefore, introduced and the nitrate of silver applied. Dr. Green then proceeded at length to detail the facts of the case, and stated that he had not seen Mr. Whitney from the 9th of December until he heard of the death. He was most willing that the matter should be discussed by the Academy, and he left the matter entirely in their hands. Dr. Green continued at some length.

The President then said that Dr. Foy should next be heard.

Dr. Foy rose and said: I was present on the occasion described by Dr. Horace Green, and saw the application made upon Mr. Whitney. Dr. Green has stated exactly the particulars of that occurrence. On introducing the tube into the throat of the decedent he made a sudden motion of the head and gave an expression of pain. The pain was not greater than I myself have felt upon having the uvula touched with nitrate of silver. The date of that visit is fixed upon my mind with certainty; so, also, is the size of the probang, for I remember noticing it very particularly, and telling Dr. Green that I could not get even a small probang, nor one thus curved, at the druggist’s. Mr. Whitney left the office before I did, and left it not suffering any particular inconvenience.

STATEMENT OF DR. J. C. BEALES.

I find myself in a very disagreeable situation. It is the first time I was ever engaged in any controversy with any of my professional friends, and you have never known me to enter into any professional dispute of any kind before, I always have avoided it. Upon the present occasion I shall be forced to take a position antagonistic to Dr. Green, for which I have abundance of evidence; and I assure you it is not voluntarily assumed, but forced upon me.

In the statement of the case I am about to read to you I am sorry to say that there are some expressions in the commencement which are put in with very great reluctance, but owing to the different reports that have been circulated, I felt it necessary to insert them, that you may have a just comprehension of the state and feeling of the patient:—

Condition and Feeling of Mr. Whitney between his last treatment by Dr. Green and his death.—December 14, 1858. About one in the afternoon I was called to see Samuel S. Whitney; I found him surrounded by several members of his family, in a state of the most intense excitement, suffering, and terror; in answer to my inquiries as to what had happened, he answered: “Sit down, Beales, and I will tell you the truth; I was such a fool as to go to Dr. Green to

be operated upon, and the d—d villian has killed me.” His countenance was pale and haggard, and had all the appearance of a man whose nervous system had received a severe shock; his breathing was occasionally irregular and almost spasmodic, coughing almost incessantly, and speaking with great difficulty and pain, in a hoarse and unnatural tone of voice; his skin was cold and clammy and covered with perspiration; the pulse was extremely frequent, feeble, irregular, and intermittent; he was excessively restless, not remaining in the same place more than a few minutes at a time; complaining of intense pain in the region of the larynx, shooting through to the cervical vertebræ, and down the course of the trachea to the chest; he kept grasping the larynx, and reiterating every few minutes that he was murdered; I endeavored to calm the excitement of the patient, and tried to examine his fauces and throat, which appeared in a state of great inflammation; I discovered no lesion, as, in fact, on account of the pain and terror of the patient, the examination was necessarily very imperfect, as he would scarcely allow the spoon to touch his tongue, and I concluded therefore to defer the examination till he should become more quiet; I gradually ascertained, partly from the family and partly from himself, that he had been several times to see Dr. Green; on the first occasion his tonsils had been amputated; at a subsequent occasion, ten or twelve days previously, (the exact dates were not told to the relator,) “a hollow tube had been passed into his lungs, and about a teaspoonful of solution of nitrate of silver had been injected into them by touching a spring at the top of the tube;” whether this was done more than once the relator does not recollect to have been stated; on the 14th of December Mr. Whitney breakfasted with his family, appearing to be in his usual health; he afterwards went to Dr. Green’s office; “the doctor passed an instrument into his throat, and, finding some obstruction, he pushed the instrument with some force; he (Mr. W.) felt something give way, immediately experienced severe pain about the top of the windpipe, and told the doctor he had hurt him;” he returned home, informed the family of what had occurred, and I was called as before stated; one P. M. I saw him with the symptoms and in the state previously described; it was evident that, under these circumstances, the only indications that could be followed were to rally the patient’s strength, to produce some reaction, and to moderate the local irritation in the fauces; to this effect I ordered him to be immediately put in bed, bottles of hot water to the feet, with sinapisms to the extremities and chest, and flaxseed poultices to the throat; a teaspoonful of chloric ether or volatile tincture of valerian in water occasionally, till reaction should be established, and a mixture composed as follows: *R.*—*Ol.* amygdal. dulc.; *syrup.* papav. alb.; *mucilag.* *G.* acag.; *liquor* potass; a desert spoonful to be slowly swallowed occasionally. For nourishment he was allowed arrowroot and flaxseed tea.

14th, 7 P. M. Is suffering severe pain, described to be in the larynx, down the course of the trachea to the chest, and round to the cervical vertebræ; pulse 112, feeble and irregular; still excessively restless; other symptoms are about the same; insisted on my re-

maining with him all night. *R.* Antimonial solut., *S.* morph., syrup. gummi, aq. destillat.; a desert spoonful every four hours; to inhale the vapour of infusion of flaxseed and poppy-heads.

15th, 3 A. M. They called me, as they observed the face to be swelling; I found extensive emphysema all round the neck, and partially in the face, rather more noticeable on the left side; he had continued exceedingly restless, scarcely dozing for a few minutes, breathing very irregular; pulse 106; urine scanty, very high colored and turbid. Continue the same remedies and nourishment.

1 P. M. Heat of surface more natural; scarcely any pain in the chest, emphysema very much increased round the throat and face, and extending down the chest; has not slept; has taken scarcely any nourishment on account of the pain in swallowing; could not continue the inhalations, although they rather relieved him temporarily. Anodine liniment to be applied to throat and chest.

8 P. M. Dr. Valentine Mott saw him in consultation with me. Is decidedly worse; emphysema very much increased; neck and face enormously swollen, it has extended all over the chest, but lower down on the right side; breathing somewhat labored; pulse very feeble, irregular, and 112; skin is again covered with clammy perspiration, and about the neck and chest of a purplish erysipelatus appearance; does not particularly complain of pain, except on talking or swallowing. Dr. Mott gave a very unfavorable prognosis. Continue anodine and take alternately a teaspoonful of ammoniated tincture of valerian.

16th, 6 A. M. Upon the whole has passed a more comfortable night; symptoms are all a shade better; the emphysema rather less in the face, but the throat and the chest are enormous, the mammæ resembling those of a stout nursing woman. Continue wine whey.

1 P. M. With Dr. Mott. The emphysema extends to Poupart's ligament on the right side; but only as low as the umbilicus on the left; cough less frequent, except when he swallows; pulse 108, and rather firmer. Same remedies and nourishment.

9 P. M. With Dr. Mott. Is not so well; emphysematous swelling increasing; cannot open his eyes till the air is carefully pressed out of the lids; chest and abdomen still more swollen; pulse more feeble, 122, although he has taken nourishment more freely. Same remedies.

17th, 6 A. M. Has slept more during the night, sometimes for nearly an hour at a time; has taken more nourishment, but there begins to be considerable mucous secretion, which interrupted his respiration and gives him great trouble to expectorate; pulse very irregular and feeble; the slightest movement increases its frequency; it averages about 108.

1 P. M. With Dr. Mott. There is no observable change in the symptoms, although he says he feels more comfortable; several attempts have been made from time to time to examine the fauces and adjacent parts, but the excessive swelling rendered them useless.

9 P. M. With Dr. Mott. There is again a slight lull in the symptoms, excepting the pulse, which is extremely irregular at 108—same remedies.

18th, 6 A. M. Has passed the best night since the attack ; there is a decided improvement in all his symptoms ; emphysema slightly subsiding ; pulse 90 ; is rather more hopeful.

1 P. M. With Dr. Mott. We consider him decidedly improving ; all the symptoms are milder ; he is slightly flighty from the effects of the anodine.

9 A. M. Is not so well again, without any other apparent cause than he would get up during my absence and sit for about an hour in a chair ; the pulse is more frequent and irregular ; the difficulty of swallowing is also evidently increasing, the attempt to do so bringing on coughing, partial strangulation, and some regurgitation of the fluids.

19th, 6 A. M. Passed a very bad night, principally owing to the great increase of the mucous secretion, that keeps him almost constantly coughing and expectorating, which he does with great difficulty and suffering ; the pulse very frequent, feeble, and excessively irregular ; take half the dose of the anodine at a time : (℞. Ammon. carbonat. grs. iv ; emuls. amygd. dulc. dr. i, every four hours, in place of the tr. valerian ammoniat.) ; although it is certain that there is some serious lesion in the vicinity of the glottis, yet it is utterly impossible to ascertain the state of the parts ; the emphysema has rather subsided about the upper part of the face, so that he can partially open his eyes.

1 P. M. With Dr. Mott. Has slightly rallied, but the mucous secretion is increasing ; the cough more frequent, and difficulty of swallowing greater ; bowels have not acted for three days ; continue remedies ; injection ; give as much nourishment as possible.

9 P. M. All his symptoms much worse ; pulse more feeble, 120 — difficulty of swallowing, with the coughing and strangulation very much increased ; consequently has not been able to take so much nourishment.

20th, 6 A. M. Has passed a very bad night ; breathing laboured, and all the difficulties of swallowing, &c., increasing ; the emphysema rapidly disappearing from the face and throat ; abdomen distended and tympanitic ; injection did not operate ; a table-spoonful of castor oil.

1 P. M. With Dr. Mott. All the symptoms gradually becoming more serious.

10 P. M. Is very much worse in every respect ; respiration excessively laboured ; the slightest attempt to dose threatens suffocation from the accumulation of mucus ; can with difficulty be induced to swallow ; the oil operated twice, and he was excessively exhausted ; pulse extremely feeble and irregular, 126 ; he is evidently sinking.

21st, 7 A. M. During the night he became rapidly worse ; did not swallow after 2 A. M., and died rather suddenly at 3 A. M., partly from exhaustion and partly by asphyxia.

Note.—A number of trifling circumstances, such as the varying appearance of the urine, the continual slight changes in the symp-

toms, &c., as not throwing additional light on the case, have been omitted, in order not to make the statement too tedious.

J. C. BEALES, M.D.

As far as relates to this case, from the time I was called in, it is a faithful narrative.

VALENTINE MOTT, M. D.

I certify that this is a faithful copy of the original.

New York, Jan. 18, 1859.

J. C. BEALES, M.D.

POST-MORTEM OF SAMUEL S. WHITNEY.

New York, Dec. 22, 1858.

Thirty hours after death nothing peculiar in the appearance of the body. Rigor mortis quite moderate. On making an incision from under the chin, in the mesial line of the sternum, it was remarked that the anterior projection of the thyroid cartilage was more than ordinary. Directly as the knife divided the deep cervical fascia on the left side of the thyroid cartilage, pus issued out—a little further division opened into a cavity, containing pus about the size of a large hen's egg, and extending a little in front of the pharynx, and downward behind and below the thyroid cartilage. At the upper and posterior part of this abscess there was an opening into the pharynx, large enough to admit the end of the forefinger. This abscess was lined by a large quantity of destroyed filamentous tissue, hanging from different parts of it like wetted tow. The entrance into the œsophagus immediately below this was perfectly sound, internally and externally. The larynx was now laid open from behind, and, at the first glimpse, a red point about the size and shape of a grain of wheat, on the left side, a little below the left chorda vocalis, and running longitudinally, led us to exclaim, there is the point of laceration of the mucous membrane, by which the air has escaped into the cellular tissue to constitute the emphysema. On close inspection, and wiping the part with a sponge, no abrasion or aperture could be discovered. Every other part of the larynx and trachœa, as far as removed, presented on its internal surface a perfectly normal appearance. Indeed, we all remarked that we had never seen a larynx and trachea more natural and healthy. We next concluded to have a look at the bronchi and lungs. Perhaps about an inch above the division of the trachea, the most beautiful vermilion redness that we ever saw on a mucous surface commenced and extended into each bronchus, but greatest in the left, and extended down each lung. Over this peculiar redness there was a cloudy shade, which vanished after a short exposure to the air. On opening the pleura, the upper lobe of the left side, at first glance, seemed covered with white, thick pus. But on close examination, it proved to be soft, strumous-like fibrin, easily rubbed off. This, on the side and posterior part, connected that lobe in patches to the pleura costalis. These imperfect adhesions were easily broken down with the fingers. The whole of the upper part of this lobe was very

red and solid, hepatized. Just at the root, or at the commencement of the bronchial ramifications, there was an open cavity, about the size of a small black walnut, of a reddish-brown color, and irregular billows surface, as though a slough had separated. At the upper and anterior part of this cavity there was a small opening through both pleuræ. This lobe was cut into in different directions, but no tubercles could be found. The lower lobe was perfectly healthy. The redness of the mucous membrane of the right bronchus extended to the lung of that side, but the three lobes were perfectly normal. There were no old adhesions on either side of the cavity of the chest. Some little appearance of the emphysema remained.

VALENTINE MOTT, M. D.,

J. C. BEALES, M. D.,

ALEX'R B. MOTT, M. D.

Dr. Beales said : During the number of years that I have attended Mr. Whitney's family, I have not known Mr. Samuel Whitney to be seriously ill, so as to be confined to his bed ; but he has for a long time been subject to various derangements of the digestive organs, such as want of appetite, torpidity of the bowels, deficiency of the bilious secretions, and occasionally a bronchial cough. For these I have frequently prescribed for him ; but during the whole or greater part of the last year (as I have been informed by the family) he placed himself under the care of a homœopathic physician, so that, with two or three trifling exceptions, I was not called on to prescribe for him until the present occurrence. Toward the end of October his sister informed me that her brother was very low-spirited and depressed, as some physician had informed him his lungs were very much affected. He wanted me therefore to examine him, but did not want me to know that he had consulted any other physician. I was not told who it was, nor do I know to this day, although I now presume it to have been Dr. Green. Sir, I wish to state that I appreciate the stethoscope as highly as most men ; I believe it, as most others do, one of the greatest discoveries in our profession, but I frankly confess that I do not believe in its infallibility, even aided by percussion. I do not believe that any man can at all times discover one or two, nor even a few tubercles, scattered about the upper lobes of the lungs. I am sure that every man, if he would frankly tell the truth, would admit that he had occasionally been mistaken. For myself, I do not pretend to any extraordinary skill with this instrument, but, independent of my private practice, I have been for fifteen years examiner for various life-insurance companies, and therefore I constantly make use of it, and ought to know something about it. Now, under these circumstances, well knowing the opinion of the other physician, I examined Mr. W. with all the care and accuracy of which I am capable ; I declared to him that I could not discover any tubercles in his lungs, and that I did not believe that any existed. [No notes of the examination.] Now, sir, on turning to the report of the post-mortem examination, it will be seen that a "cavity" was found, but not a single tubercle.

I will not, of course, assert that such a thing as a tuberculous cavity never exists without the presence of other tubercles, but I do say, that it is a most rare and exceptional circumstance ; but I wish to make a few remarks on this "cavity." Was this a tuberculous cavity ? It neither contained any kind of fluid, nor was it lined with lymph, nor the slightest appearance of false membrane, nor were there any remains of tuberculous deposit, and I at least have never seen a tuberculous cavity similar to it—in fact, although that word was used in the report as probably most readily occurring—it could scarcely be justly so called, it was rather a shallow depression or scooping out of the actual apex or superficies of the lung; its surface was not like that of a "cavity," but rough and irregular, and had that peculiar appearance that all present remarked it looked as though a slough had separated. Communicating with it was a perforation in the pleura sufficiently large to admit the little finger of the gentleman who had operated ; all other appearances about the lung were of the most recent disease, the hepatization was in its earliest stage, and the adhesions spoken of were so recent that the folds of the pleura were, more properly speaking, glued together than adhered. We did not discover the slightest sign of chronic disease in or about the lung ; and so striking was this fact, that Dr. Mott told the family, after the post-mortem examination, that we had not seen any diseases that might not have been produced within a week. But Dr. Mott is here, to speak for himself. Dr. Green says that the epiglottis was thickened and its border whitened with a line of erosions. At the post-mortem, this part was very minutely and carefully examined, and found to be extraordinarily healthy and free from the slightest vestige of disease. Under all these circumstances, I am forced to believe that Dr. Green erred in his diagnosis, and that these various operations were unnecessary and uncalled for. I do not say that the operating of tubing caused the disease in the lung, because I confess myself ignorant of the effects of nitrate of silver on the substance of the lungs ; but for the operation itself, I do not hesitate to express my conviction that it is at all times attended with extreme peril and risk of the patient's life. I have never heard of or seen a single case of phthisis where it has effected a cure, and therefore I believe it to be perfectly unjustifiable. I believe that a slough or eschar was formed at the apex of the lung, involving the pleura, and which, at the time of the unfortunate occurrence, became separated by the violent exertions and spasmodic coughing—the air percolated into the cellular substance, and produced the emphysema which formed so prominent a symptom. I will now leave this part of the case, and go on to that which was, after all, undoubtedly the immediate cause of the death of the patient. I mean the lesion of the pharynx. By referring once more to the post-mortem examination, it will be seen that there was a lacerated opening in the pharynx communicating with a large abscess. I have heard it rumored—and indeed it has been stated in the public papers, especially in an article in the *Tribune*, which is evidently from a suspicious source—that this abscess was chronic. Insinuations were

made against Dr. Mott and myself in regard to it. If, sir, the friends of Dr. Green have given currency to this idea, or intend in any way to suggest it—then has the Dr. ample reason to say, “Defend me from my friends.” It appears by his own statement, that for two months previously to his death, Mr. W. was under the professional care of Dr. Green—for my own part, I solemnly declare, I have never prescribed for nor heard him complain of his throat. Early in October the doctor cut out one of the tonsils. Did the chronic abscess then exist? If so, how was it that the doctor did not discover it? He several times applied the sponge and probang—did the abscess then exist? On the 8th of December, Dr. Green states that he passed the tube down the tracheæ. This, at all events, whatever we may think of the operation itself, requires a careful observation of the parts; did the abscess then exist, and the doctor not discover it? But, sir, on the very day of the last unfortunate operation, Dr. G. was showing to Dr. Foy how he applied the sponge to the larynx and showed why it only entered the pharynx—of course the organs were closely observed—how was it that the doctor did not diagnose this chronic abscess? Why, sir, the reason that Dr. G. did not see this chronic abscess, was because it did not exist.

Sir, I do not believe that among all those who are now listening to me, there are two opinions. At all events, to my mind, the evidence is irresistible, that in the last unfortunate operation, on the 14th of December, that the pharynx was accidentally lacerated by the probang; the first effects, as we have seen, were excessive irritation of the parts, and a severe shock, increased no doubt by the nervous temperament of the patient, and his conviction that the injury was fatal. Afterwards, doubtless, portions of the various foreign bodies he attempted to swallow, food and medicine, were forced into the wound. After three or four days a sloughy abscess began to be formed, which, gradually increasing in size, formed a mechanical obstruction to swallowing; by pressure on the adjoining parts, prevented the epiglottis from properly closing, and produced the strangulation and regurgitation which we have noticed, till at length the unfortunate patient sank from exhaustion and asphyxia. I wish now, sir, with your kind permission, to make a few remarks with respect to the post-mortem examination. I perceive by statements in the public papers, the source of which can easily be understood, that we are censured for not having Dr. Green present. I need not say that, as the case progressed, the excitement and feeling in the family did not diminish. I do not think that on this point I have the right to judge Dr. Green; he doubtless did what he thought right in the matter; but had he, by sending inquiries or showing any sympathy with the misfortunes of the family, it would have offered an occasion to Dr. Mott and myself to have introduced him; that he did not so act, was repeatedly remarked by many of the family. Now, under these circumstances, it was no pleasant thing to ask permission of the family, and I frankly allow we did not. But, for myself, I solemnly declare that I went to that examination without the slightest idea of criminating Dr. Green, but

with the earnest desire to ascertain the nature and extent of the injury. But let me ask, what do these insinuations mean? I will tell you how the post-mortem examination was arranged; I asked Dr. Mott who he would wish to perform it; he replied, his son, Dr. Alexander, and on the day of that operation I was introduced and spoke to that gentleman for the first time in my life. The insinuations to which I have alluded either mean that we were not competent for the examination, (if so, let the truth be told,) or that the examination or report was distorted to meet particular views. On this point I shall merely remark, that Dr. Alexander Mott has never, till to-night, heard me say a word as to my views of the case. I do not know his. We have never interchanged a word on the subject. Both he and his father hold such positions in the profession and society, as ought to place them beyond such calumnies. As for myself, those who know me, sir, will not, I am proud to believe, imagine me capable of misrepresenting solemn facts, for any purpose whatever; and this is all, sir, I think it needful to say in answer to these unmerited and disgraceful innuendoes.

Dr. Valentine Mott followed, strongly substantiating the post-mortem examination, which, he said, was prepared by himself, and controverting Dr. Green's theory of the case.

After him, there ensued a spirited discussion between Drs. Mott and Beals on one side, and Drs. Green and Foy on the other.

Dr. James Wood moved that the matter be referred to a committee. An exciting debate ensued upon that and other motions. There was cheering and hissing. The commotion and debate continued unabated until 11½ P. M., when the whole subject was tabled.—*Med. News.*

JOHN DAWSON, M.D.:

Dear Sir—I have received a copy of the following interesting paper on transfusion, from the author, a scientific gentleman of New Orleans, with whom I formed a pleasant acquaintance during a visit made to that city last spring. If agreeable, I should be pleased to see it in the next number of your able Journal. The patient was his only sister. It saved her life in October last, while the epidemic, yellow fever, was yet prevailing with such sad and fatal results. He writes me that she remains entirely well.

Very respectfully, yours, &c.,

WILLIAM M. AWL.

COLUMBUS, O., January, 1859.

Transfusion in Yellow Fever—A Successful Case. By N. B. BENEDICT, M.D., of New Orleans.

Messrs. Editors:—In consequence of the pressure of indispensable engagements, I am able to furnish you only a brief outline of the

circumstances attending the case of transfusion which was successfully practiced in this city, on the 25th of October last.

The patient, Miss J. B., was a young lady whose life, until early womanhood, was passed in north-western New York, whence she removed, in 1845, to Mississippi, and thence, in 1854, to New Orleans, where she has constantly resided during the past four years: never having suffered any serious illness within the last fourteen years.

On Monday, October 11th, she was exposed to a drenching rain, but felt no alarm at the sensations which followed, (supposing them to be merely those of a bad cold,) until the evening of the following day, when she was seized, at 9 o'clock, with a violent chill. The symptoms of yellow fever—the pains in the head, the back, and the limbs, the flushed face, the fiery-red eye, and the rapid pulse—could not have been more characteristic than in this case. It proved unusually obstinate—the treatment exerting little influence upon any of the symptoms, during the first stage of the disease. My near relationship to the patient induced me, on the third day, to request the assistance of Dr. C. B. White. On the 5th day the counsel of Dr. Wm. E. Kennedy was requested, and both those gentlemen continued their attendance, daily, throughout the course of the disease. On the fifth day, there was some bleeding from the mouth; but the flow was moderate, and occasioned no alarm. On the sixth, it continued, but was so slight as to be regarded as marking a favorable tendency. The average pulse, on these two days, was 86—ranging from 80 to 92. On the morning of the seventh day, the eye presented an appearance as if a drop of serum had collected in the outer canthus; the bleeding from the mouth had increased, and the appearance of the napkins employed to absorb the blood, agitated her excessively; but at the mid-day visit, although the hemorrhage was unabated, yet so much had the complexion improved, that the impression on the minds of the medical attendants was, upon the whole, favorable. The hemorrhage increased until a late hour in the evening, being aggravated by the uncontrollable perseverance of the patient in wiping away the clots. It suffered a slight check during the night but returned on the following morning. Throughout the eighth, and most of the ninth day, it continued without abatement; and her efforts to clear the mouth by hawking, rinsing, spitting, and wiping, not only increased the flow, but occasioned great fatigue. To prevent these efforts, except by a resort to unjustifiable force, was impossible. The effects of such protracted hemorrhage were apparent in the blanched complexion, the colorless lips, tongue and gums, and the pinched features; and serious alarm began to be felt at a loss which resisted all the measures employed to restrain it. Some estimate may be formed of the quantity lost, from the fact that, in the single night of the eighth day, the blood diluted with saliva, saturated two sheets, so that no part of them remained unsoiled. Added to all this was the hemorrhagic tendency manifested by other mucous surfaces besides those of the mouth, during these two days. Towards the close of the ninth day, the hemorrhage from the mouth was several times interrupted for short intervals; but owing to the discomfort caused by

the clots, she provoked its return by removing them. About 8 o'clock, P. M., she had a sudden imperfect syncope. Thence forward the bleeding became very slight, and although nourishment and stimulants were retained, the complexion was much blanched, and the mental condition was that of utter despair as to recovery. The rate of the pulse was steadily accelerated; the average for the seventh day being 98, for the eighth and ninth days 104, for the tenth day 115, and for the eleventh and twelfth days 120.

On the tenth day there was much complaint of soreness of the throat, the tongue, and the inner surface of the lips (which were found to be invaded by small superficial ulcers); of severe pains in the sides of the head, at the tops of the ears; of morbid sensations—at one time, as if ashes filled the throat—at another, as if the feet were much more elevated than the head; and there was uncontrollable desire to talk of affairs and of interests the most foreign to a sick room; yet, all was perfectly rational. In the course of this night, the hemorrhage ceased, and did not again return. The eleventh and twelfth days were characterized by a continuance of those nervous vagaries, and by the increased frequency of the pulse to 120.

At 3 o'clock, in the morning of the thirteenth day, she had profuse perspiration, and a paroxysm of hysterical weeping. The general surface, as well as the extremities, were cold and clummy to the touch; the pulse so feeble and so rapid as not to be counted; and the restlessness, and desire to toss about the limbs, was excessive. Under the use of stimulants, this condition was relieved, the natural warmth was restored, and she fell asleep. At 7, A. M., the pulse had receded to 112, and was regular though feeble; and nearly every portion of the surface—the limbs as well as the trunk—was found to be covered with sudamina. At 10½ A. M., the apparent amendment was so marked, that the medical attendants were more hopeful than on any previous occasion. The pulse had fallen to 108. From the sixth day to this time, nourishment and stimulants had been taken in quantities such as to encourage the belief that the terrible waste of blood would be repaired by the ordinary process of assimilation. At 11½ o'clock, she awoke from a quiet sleep, complained of strange and bad sensations, and said she thought she must be dying. She presently turned upon her side, and was suddenly seized with vomiting, which continued throughout the day and part of the following night. Nothing was retained by the stomach, with the single exception of brandy, and even that only occasionally. After mid-day, an enema of mustard and water was given, but did not return. It was followed by other enemata of warm water, with no result except distention of the abdomen. The sinking and prostration were excessive; the pulse was scarce perceptible, yet its frequency was not found, at any time, to exceed 108; and she exhibited a constant tendency to lapse into stertorous slumber. Over the whole region of the aorta was distinctly heard the bellows-sound so characteristic of anemia. Injections of beef-tea, brandy, and carbonate of ammonia were repeatedly given, only to be rejected; but

the action of the bowels seemed limited to the rectum. At every movement of the body, distressing hiccough occurred, convulsing the whole frame, and lasting on each occasion, about a minute. A Sinapism applied to the spine was succeeded by arrest of the vomiting, at 10 P. M., but there was no other improvement throughout the night of the thirteenth day.

On the morning of the fourteenth day, a stimulating enema was followed by discharges resembling coffee grounds, and by relief of the distention, but there was no amelioration of the symptoms which steadily tended towards the fatal close. The mortal restlessness increased, the pulse became but the merest flutter, and was, much of the time, inappreciable, and its number could not be ascertained.

At the morning consultation, Drs. Kennedy and White declared their conviction that she could not possibly survive for more than three or four hours. I then said, "It is an old saying, that 'drowning men catch at straws.' For the past twenty-four hours, I have been in torture with the thought of such a straw, and I can not refrain from naming it: I mean transfusion. These fatal symptoms being occasioned by the loss of the last few ounces of blood, I can not persuade myself that it is not a serious duty to inject into her veins a few ounces, of fresh, healthy, living blood, as nearly as possible identical with that which she has lost." Both those gentlemen promptly embraced the suggestion that it was the only remedy that could save her life; but thought it impracticable for want of persons experienced in the operation, and a suitable apparatus. Having, in 1853, prepared a report on transfusion, (which was read before the State Medical Society, and a part of which was printed in *The New Orleans Medical and Surgical Journal* for that year.) I had become imbued with the conviction that the operation is one which, on certain occasions, can not be withheld without criminality; and I had obtained from England the apparatus for the purpose, which was approved by the father of transfusion, Dr. James Blundell, formerly "Lecturer on Midwifery and Physiology, at Guy's Hospital." The possession of such an instrument at once gave form to the proposition, and it was determined that if a person could be found who would undertake the most difficult and delicate part of the process—that, namely, of preparing the vein of the patient—the operation should be attempted. A little past the hour of noon, there were assembled at my house, Drs. Wm. E. Kennedy, C. B. White, C. C. Beard, D. W. Brickell, and L. Greenleaf. The apparatus was examined, its use described and illustrated, and every part of the process was fully explained and discussed. The task of preparing the vein was undertaken by Prof. C. C. Beard. An incision about two inches in length was made over the median vein in the left arm. A director was passed beneath the vessel, near the lower part of the incision, in order that it might be held under perfect control, and the loss of any blood from its distal extremity be prevented. An incision was then made into the vein, immediately beyond the director, to receive the beak of the syringe. It is due to Prof. Beard to say that nothing could exceed the skill and steadiness

with which this operation was performed. The blood was obtained by the assistance of Dr. Greenleaf, from the arm of a young gentleman who exhibits a remarkable example of perfect health, and who had experienced yellow fever during the epidemic of 1853.

It was my purpose to use the apparatus myself; but as the moment approached, my near relationship to the patient made me distrust my firmness, and I requested Prof. Brickell to take my place. He consented to do so, but substituted for the syringe belonging to the apparatus, one of simpler construction, into the beak of which he absorbed the blood as it flowed into the receiver of the transfuser. By inverting the syringe and pushing upward the piston, the last bubble of air was expelled. The beak was then introduced, by Dr. White, into the orifice of the exposed vein of the patient, and Prof. Brickell, with consummate care, passed the blood into her arm, before it had time to cool or even to repose for more than a few seconds. All the apparatus employed was immersed in warm water, or wrapped with heated cloths, so as to prevent any reduction of the temperature of the transfused blood. The operation was commenced at a few minutes before 1 o'clock, and was finished safely and satisfactorily, in all respects, a few minutes past that hour.

Another person who was constantly with her, writing to a distant friend, used the following language: "There is no doubt that Death had begun his work before this took place. Her extremities were cold; she swallowed with difficulty; her nose had the pinched look of death; her lips were depressed and bloodless, covered with a yellow, dry, parched skin; and her distress was very great. The effect of the transfusion was immediately apparent in the calming of the nervous system. The next morning, her lips were full and red; I picked off the yellow parched skin, and found them as natural as health; and she had no subsequent bad feelings except dryness of the mouth, and stiffness of the muscles of the throat. She was like a new creature, and was saved."

I will merely add to this statement, that the pulse, which at half past 12, under the influence of medical excitement, became once more appreciable, numbered 136, and immediately before the operation, 125; at its termination it was 120; and three hours later it remained the same, but had acquired more fullness and strength. The voice recovered its natural tone, the face acquired color, the extremities grew warm, all nausea and hiccough ceased, and ordinary drinks were perfectly retained. From the time mentioned, to the present hour, her recovery has been uninterrupted. Her health has long since ceased to be a subject of any anxiety.

It was not doubted at the time of the operation, that the quantity of blood injected was equal to three and a half ounces. It was afterwards ascertained, by accurate measurement of the syringe, that its capacity was not quite equal to two and a half ounces. Small as the quantity was, it yet sufficed to turn the scale in her favor.

I have thus, Messrs. Editors, endeavored to give a plain statement of the facts as they occurred. I have been the more particular in these details, because I am informed that an erroneous impression has, to

some extent, prevailed that I was the sole operator. The error is attributable to ignorance of the complicated nature of the operation, and to misconception of the flattering notices which appeared in a daily paper of this city, shortly after the event. Transfusion was not adopted without the consent of men who are among the first in the profession; and I venture the assertion that it never will be safely performed, on the human subject, without the assistance of four medical gentlemen at least. Nothing could be more mortifying to me than the acquiring of professional distinction by any means but such as are recognized by the medical profession as legitimate, unless it should be the acquiring of distinction which is unmerited. I trust that you will appreciate, therefore, the propriety of these explanations being made in your journal, inasmuch as justice required details which are improper in a newspaper.

Were the true nature and statistical results of the operation of transfusion generally known, its performance would be demanded in many cases which are now consigned to a remediless doom. There is no fear that it will ever come to be employed as one of the common remedies. It is applicable to no pathological condition, save that which is commonly called "collapse," induced by hemorrhage, by certain exhausting discharges, or by utter inability to receive or retain nutriment; and the only transfusion now sanctioned, either by physiology or by common sense, is that of *human venous blood into human veins, identical, as nearly as possible, with that which has been lost, and in quantity just sufficient to arrest the tendency towards death.* Prior to the year 1853, the total number of recorded cases, practiced under these conditions and restrictions, amounted to twenty-one. Of these, but two died—or, less than one case in ten!

If I have any merit in this affair, it is, that I have been, for many years, the earnest advocate of transfusion, in those cases where alone it is proper; that I have labored to make it binding upon the consciences of medical men to practice transfusion whenever it is justifiable; that I have approved my faith in it by submitting to it, as the first instance which I am apprised of in America, a person whose life is as dear to me as my own; and that before it was attempted I seriously declared to those professional friends, heretofore named, my willingness to take upon myself all the odium that might attach to a failure. I feel that I can never sufficiently thank those gentlemen for what they did for me in this the bitterest trial of my life; and that they have thus laid upon me new obligations of fidelity to the principles of our noble profession.

New Orleans, November 27th, 1858.

Ecrasuer in New York Hospital.

So much is said now-a-days about the ecrasuer, it will perhaps not be inappropriate to commence with a short account of the use of this instrument.

There have been but two operations performed in this institution with this instrument—one was upon a case of hemorrhoids, and the other for amputation of the penis. It was first used in the case of hemorrhoids by Dr. Van Buren. The patient, a lady 49 years of age, had suffered more or less from this troublesome difficulty for a period of ten years, during the whole of which time she obtained very little relief from the palliative means usually made use of in such cases. On her admission to the hospital, October 12, 1857, she had four tumors around the verge of the anus; the two largest were about the size of a large hickory nut, and the other two as large as the end of the little finger. She being very desirous that something should be done for her permanent relief, an operation was determined upon and performed with this instrument four days after admission. The two largest tumors were only removed by the ecrasuer, the other smaller ones being ligated in the usual way. The operation occupied about fifteen or twenty minutes, and but a small quantity of blood was lost. The parts healed kindly, the ligated portions separating in good time, and she left the hospital entirely cured on the 4th of November following.

The next case occurred in the service of Dr. Halstead; amputation of the penis for warty degeneration of the glans; suspected to be of a malignant character. The patient was 16 years of age, with a fair amount of bodily vigor. The diseased mass occupied the whole of the glans, spreading out into excrescences which were equal in size to a couple of English walnuts. The disease first made its appearance five months previous to admission, a short time after impure connection, and kept gradually increasing until it had attained the size already mentioned. Its growth was, without doubt, very much accelerated by the want of proper attention to cleanliness. Various means were resorted to while in the hospital to reduce the diseased mass, but with no good result attending; finally, a consultation of the attending surgeons was held, and it was deemed expedient to amputate. This was accordingly done.

The operation, which occupied about twenty minutes, proved a very successful one as far as the amputation was concerned, but a considerable amount of hemorrhage followed from the open mouths of several vessels, one of which was the arteria dorsalis penis. The application of several ligatures was rendered necessary. The parts healed nicely, the process being much accelerated by the favorable shape of the stump following the action of the instrument, the integument tending to turn inwards, leaving but a small extent of raw surface to heal by granulation. The meatus urinarius was kept pervious by the occasional introduction of an instrument, and before he left a large sized catheter could easily be passed. He was discharged cured a couple of weeks after amputation. No sloughing followed

in either case. The instrument used in both cases was *Chassaignac's*, manufactured by *Leur of Paris*.

The last case tends very decidedly to disprove one of the advantages claimed for the *écraseur*, viz., arrest of hemorrhage. A considerable amount of blood was lost, notwithstanding due deliberation was employed in the lacerating process.

This fact is also illustrated by a case that occurred in the practice of Dr. Van Buren, at the St. Vincent's Hospital, after amputation of the cervix uteri by means of this instrument, in which thirty-five minutes were employed in the operation. An artery required the ligature in consequence of its continuing to give forth blood.

I have learned that Dr. Isaacs, of Brooklyn, performed subsequently a similar operation upon the cervix uteri with a good result.

The surgeons generally look upon this instrument as useful in cases where amputation has to be resorted to upon parts which are not easily accessible to other instruments, and where, under ordinary circumstances, profuse hemorrhage is expected. They, in common with every one who can amputate with dexterity and neatness, by no means sanction the use made of it by some of the French surgeons of the present day ; for instance, as an instrument for amputation of the limbs. With all the advantages claimed for it in such cases, they are by no means sufficient to tempt the operator to throw aside his catlin and resort to a practice which, at the best, is a very barbarous one.—*New York Journal*.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

Mind and Matter: Or a Series of Physiological Inquiries, in a Series of Essays, intended to illustrate the Mutual Relations of the Physical Organization and the Mental Faculties. By SIR BENJ. BRODIE, Bart., D.C.L, Vice President of the Royal Society. With additional notes by an American editor: New York—Samuel S. & Wm. Wood, 390, Broadway. 1858.

The author of this little volume, it is well known, has an enviable reputation. With the qualifications of a very able physician, he unites very rare powers of intellect. No man in the medical profession is looked upon as possessing more of discrimination and strength—qualities of mind indispensable to the medical man, who, of all others, has the most to do in unraveling the mysteries of

nature, and understanding the influences of Sociology. Thus endowed, the author is certainly calculated to inspire, with reference to the inquiries he has undertaken, although proverbially difficult, a large amount of expectation. What, says the reader, has Sir Benj. Brodie to say on this most difficult of all human inquiries—mind and matter. His professional avocations have certainly afforded him opportunities for the investigation; and he has now got it into his head that he is possessed of something worth knowing, and he is ready to give the world the benefit of his labors. In short, from just such a mind as that of Sir Benj. Brodie we might reasonably expect light to be thrown into crevices and across chasms not hitherto illuminated. The book before us, therefore, we willingly acknowledge, presents the conflict of a great mind with a great subject. We have, however, said enough of expectations, and shall now proceed to give a very brief notice of the author's performance:

An examination of the work impresses us with the purity of the style in which it is written. Sir Benj. seems to have ideas, and he expresses them in very few words. He has adopted the dialogue form as the best adapted to the subject. The work, therefore consists of six Dialogues, with "Additional notes by an American Editor."

The first Dialogue embraces rather a wide range of inquiries. We shall only, however, notice a few of its more important points. The first question brought to the attention of the reader is *Mental Labor*. This, in our judgment, is disposed of very cleverly. Most persons regard labor of all kinds as one of the curses entailed upon the race, and, as a consequence, a period is looked forward to when such troubles are to cease. Of a great many this expected period is the earthly heaven, and all energies are employed to bring it about. The merchant, the farmer, and the mechanic, work day and night to obtain the means which will render work unnecessary. All classes strive to get what they call a competency for children—means enough to make it optional with the child as it regards industrial pursuits. Is such a course philosophical? Is it grounded in the nature of things? Is it calculated to make life agreeable, to promote a desire to live? The author before us thinks not—and we fully agree with him. Mental exertion is just as indispensable to health as physical, and more bodily disease results from the neglect of it than from the neglect of physical. The brain was made to do a certain amount of work every day, and this it must do to avoid

atrophy or disintegration. "We must do something to kill time," is a vulgar phrase that expresses a great deal. Many business men, under the impression that they will be more happy, abandon their pursuits, and then die of *ennui*, or contract hypochondriasis, or some mental or physical trouble that renders life a burthen.

The idea, therefore, entertained by so many of finding enjoyment in a life of leisure, is, without doubt, erroneous. As long as mental capacity is present something must be provided upon which it may be daily exerted. This should be carried to the extent of producing the sensation of tiredness. Sir Walter Scott found himself wearied daily with five hours labor. Bacon worked only about four hours daily on the *Novum Organum*. Cuvier worked but about four hours. The labor of Bacon was the most severe. At every step something new was developed, which, in its multiplicity of relations, had to be considered. After he became acquainted with the zöological type, Cuvier had much in the way of mere repetition. Although possessed of a very uncommon amount of information for a man in his day, Scott plied mostly his powers of imagination. In short, the first operated mostly with logic: the second with special senses; the last with the imagination. Yet it seems either of them were incapable of six hours daily mental toil; or rather were not capable of *enjoying* six hours of daily bliss. The period of repose from intellectual pursuits is one of enjoyment. Here the stress is taken off, and in its place extacies and felicities, without the consciousness of effort, float through the mind in rapid succession.

What we have said relate to minds of the first order—minds made for understanding something of what surround them. The great mass of mankind think but little. They secure repose by bodily fatigue. They seem to live for the animal, calling into play only so much in the way of thought as is necessary for the limited sphere of their operations. With this want of cultivation, they become an easy prey of prejudice, passion and fanciful analogies. There would be no epidemics of fanaticism if the cultivation of the observing and reasoning faculties were general. This, however, is never to be expected. It implies a higher organization of the nervous system than is found to obtain. But suppose the masses could be organically leveled up to the right point, the pursuits which necessarily obtain in a good order of civilization, are far from being favorable to either accuracy or intensity of thought.

We have often been struck with the ease, for example, with which

well educated men are ensnared by the traps which the medical mountebank sets for them. But when we reflect that the mathematician is led to be over-credulous from the nature of his pursuits, and that the clergyman operates only on the faculty of credulity, and that poets and novel writers deal daily with the imagination, we may cease to wonder why it is, that a science which requires, in order to be appreciated, close observation and accurate powers of reasoning, fails to be distinguished from the most transparent humbugs.

Many persons of leisure, who find time very heavy on their hands, try to pass it off by reading. This is not apt to be successful: mere reading without an object in view disposes to irritation rather than tranquility.

The public mind of the present age has dogmatized itself in favor of general education, and it is ready to deal out censure in some form or other, on all those who do not subscribe and support, to the fullest extent, the measure. It seems to be the notion that all classes of society should be put through the schoolmaster's mill—that all should have a good knowledge of their mother tongue of the dead languages, of figures as far as mathematics; and as much in the way of modern languages as time will permit.

In regard to the propriety of trying to make scholars out of all the children of a community, doubts are by many entertained. Supposing it practicable, would it contribute really to enjoyment? Would it have a tendency to make the masses more peaceable, more industrious, or more inclined to exercise proper veneration toward rulers and established institutions. Where in our own country have we the most fanaticism? In what region has spiritualism and table-turning had the most votaries? Or, is it a mere coincidence, that those portions of our country which are able to boast of having the best educational institutions are afflicted with the greatest number of enthusiasts and imposters.

Is it philosophical to subject all the children of a community to the same routine of studies? This would imply that they are alike in mental constitution, and that they will develop alike, than which nothing is further from the truth. Common minds might, perhaps, be elevated by such a course; the better order in all probability dwarfed. Sir Humphrey Davy, in a letter addressed to his mother, in regard to his schoolmaster, after he had settled in London, says: "I consider it as fortunate that I was left much to myself as a child, and put on no particular plan of study, and that I enjoyed much idleness at Mr. Coryton's school. I perhaps owe to

these little circumstances the little talents I have, and their peculiar application. What I am, I made myself. I say this without vanity, and in pure simplicity of heart." Thus wrote the man who, of all others, gave to chemistry the greatest impulse. The earths and alkalis yielded their greatest secret to his genius. In the medical profession, John Hunter, if measured by his contributions to science, or the originality and comprehensiveness of his views, is the tallest man. Those who are familiar with his history are aware that he knew scarcely anything of letters or figures when he came to London, and entered a dissecting room under the direction of his brother. Sir Walter Scott says, "the best part of every man's education, is that which he gives himself." Neither Locke nor Bacon could be induced to stay at college long enough to obtain degrees. Are these instances significant of anything wrong in our system of education, or would the individuals noticed have been greater had they all been rigorously confined in early life to the routine of studies prescribed by the colleges?

The opinion is gaining strength daily that while a regular systematic education may be of great value to an ordinary mind, it may from the restraints that it imposes upon a good one, dwarf it. Constituted as John Hunter was he would likely have been injured by having been compelled at the time he entered the dissecting room to spend two or three years in getting a knowledge of Greek and Latin, and the same length of time in posting himself up in figures, logic and the like. Would not such a course have levelled the great naturalist down to the *status* of an ordinary man? When Hunter left his home and traveled on foot to London he was unconscious of the amount of force he possessed, or of its character with reference to any particular pursuit. His object, from all that we can learn of him, was nothing much above bread and butter. But his mind was fresh. It had not been surfeited with things uncongenial; and once engaged it traveled with delight. Every step was characterized with the discovery of a truth. What to many would have been disagreeable labor was to him enjoyment. One discovery created the desire for another, and thus he passed his useful life, accomplishing more than any other medical man.

It may be said that what is true of minds naturally great, is not true of the character of mind possessed by the larger portion of mankind—that while our educational systems might benefit the latter, they might by curbing or giving an unnatural direction to the faculties of the former prove injurious. But how are we to know

what a boy's mind is until the greater part of his education is completed?

From what we have observed of mental phenomena we confess sympathy with those who believe in a difference in the way of natural endowment. Nature has but one pattern for all who belong to the genus homo, but it is the proportion of what enters into the composition of each individual that makes the difference. Of the many who study Logic, how few are there who reason well! And of those who practice in our profession, how small the number who comprehend the extent of the science, and are able to handle properly the facts connected with a complicated disease?

With respect to the ruling idea suggested by the title of the book—"Mind and Matter," Sir Benj., so far as theology is concerned, is orthodox. While he recognises the dependence of mental phenomena upon nervous structure, he at the same time believes that the mind is capable of an independent existence. "There is nothing," says he, "unreasonable in the universal expectation of mankind, (so universal that it may be regarded as an instinct,) that there is something in us which will remain and be capable of perception and thought, and it may be of pure and high aspirations, when the gross material with which it is now associated has become resolved into its original elements."

The desire of man to live in society, says Sir Benj., is as much an instinct in him as it is in the bee, or the beaver, or prairie dog. Ought not this to settle the disputed question as to the existence of a moral sense, the innate power of distinguishing right from wrong, justice from injustice?

In regard to the two questions raised here, the separate existence of the mind and an innate moral sense, the author seems to be influenced in his conclusions more by his desires than by the facts. We simply know nothing of the mind disconnected from the body, though this by no means proves that it does not exist independently of the body. We know nothing of a moral sense, justice and injustice, right or wrong, without education. All the facts are here. Still we regard it as a species of logical arrogance for any one to say that the moral faculties are created by education. About such questions we know nothing, as Priestly has well remarked.

We have the question formally raised, as to the moral and intellectual qualities of inferior animals, and the doctrine stated that in

essence these are the same as in man. The scattered observations of Lord Brougham, Cuvier, Lock, Dugald Stewart are referred to as strengthening the question of identity. Sir Benj., goes however still further. He thinks brute animals possess also the power of "abstraction" to a certain extent.

While discussing the mental principle, its qualities and modifications in inferior animals, allusion is made to its *divisibility*, and the *diplozoon paradoxon*, as an example, is cited. This parasitic animal consists in fact of two animals united in the centre so that they have a part of their viscera in common, but with two distinct nervous systems, which it is supposed would enable either half of the individual to live, though separated from the other.

We have now devoted as much space as we can afford to this work, after having read it carefully and re-read portions of it. The work is worthy of perusal from the simple fact that it in all probability shows about all of which the British mind is capable with reference to metaphysics. Sir Benj. has invested the subject with some degree of interest. On the whole, however, we do not see why he should have regarded himself as under any obligations to humanity to write this book.

Transactions of American Medical Association. Instituted May, 1847. Vol. xi. Philadelphia, 1858.

The present volume, for size, is larger than its predecessor of the year '57. It contains over one thousand pages, got up in the usual style.

We have previously published the minutes. The volume is filled up mostly with reports of Standing and Special committees. Many of these reports are elaborate, and should be in every library.

After the address of the President, Paul F. Eve, of which we have spoken previously, the volume opens with "a Report on the Medical Topography and Epidemic Diseases of Kentucky," by W. L. Sutton, M.D., Georgetown, Ky. This report occupies some 87 pages, and is written with some ability. We do not, however, wish to be understood as endorsing every thing that we see in it.

Is it expected that these reports give a history of every thing that bears in any way on the diseases of the region to which they relate, including anomalous affections, physical, mental, and moral?

or should they be confined strictly to topography and staple diseases—the epidemics that appear to be connected with the locality? We ask these questions because we see a large part of Dr. Sutton's report taken up with an account of what he terms "*the Jerks*," or "*Epidemic Epilepsy*," an affection resulting from long protracted religious excitement. Are such phenomena peculiar to Ky.? Do they not occur everywhere, where the human mind is goaded to excess with religious subjects. They are not even incidents, we suppose, to the christian religion, much less to its teachings in Ky.; but are a part and parcel of the workings of fanaticism in all religions.

Nor have we been of the opinion that a standing committee on Epidemics was under any obligations to hash up reports of predecessors, for the purpose of making one for itself. Dr. Sutton, has, in making out his report, given an account of *Milk Sickness*, from reports by Drs. Barbour, Seaton, Drake, etc. Dr. Drake's report has long been in the hands of the profession, and needs no repetition. The few cases given by Dr. Barbour, are better suited to the journals of the day, than to a report for a learned society; for they contain nothing but what has been, over and over again, placed before the profession.

Reports to be of service, should be confined to facts. Almost any one can make himself useful when this rule is observed. Place the facts before the profession, and its combined judgment will evolve from them, sooner or later, the proper inferences. In the report before us, we have a theory proposed, viz: that *Milk Sickness* is not a disease *sui generis*, but a form of malarial fever. In this view, both Dr. Sutton and Dr. Barbour concur. We have heard of this theory before. It has been entertained by some very clever minds. But we have always observed that those who urged it most, possessed but little experience. This is Dr. Sutton's condition; and from what Dr. Barbour has reported, we should think it also his. The testimony of a great many good observers, with large experience, is, that the disease is often complicated with malarial fever, and occasionally with typhoid.

There are some characters relating to Milk Sickness, in regard to which most all observers are agreed. These are *muscular debility*, *vomiting*, and *constipation*. These, indeed, have been looked upon as pathognomonic. Nevertheless, in two of the best marked cases

that we have seen, there was no constipation; but in the place of it, painful discharges of a dark pitchy character. In another case which recovered, the constipation lasted fourteen days.

What we have observed of the origin of the disease, induces the belief that it never occurs from using the milk, or eating the flesh of animals, except the animals had been grazed on wild pasture. The disease has disappeared from every neighborhood where it was formerly endemic, as soon as the lands were cleared up and put into cultivation. Again, those regions famous for malarial affections, throughout Ohio, have suffered very slightly from milk sickness. It has occurred mostly on the oak table-lands. We may just add, if the disease is malarial in character, it differs from any that we have seen or heard of. It is a new form.

The report on the Medical Topography and Epidemics of New Jersey, by L. A. Smith, occupies some twelve pages. That of Geo. Mendenhall on the Epidemics of Ohio, only about three pages. The report of Dr. Smith of New Jersey contains some suggestions in regard to the use of *veratrum viride* in febrile affections characterized by excessive action of the heart and arteries. The author says, "I have prescribed this remedy with pleasing effects and do not hesitate to recommend it in preference to those usually resorted to for the same general purpose." Other testimony is quoted by the author in favor of the drug under similar circumstances.

To what is the excessive action of the heart and arteries due in typhoid fever? Ought not this question to be settled before prescribing a remedy to curb it? The fashion just now is to regard this excess of action as an expression of the effort of the organism to eliminate the febrile poison. At any rate, until it can be satisfactorily shown that the excessive action is, either the disease itself or a part of it, efforts to check it by *veratrum*, or anything else, are not very intelligible. If typhoid fever is, like small pox, due to the presence in the body of a poison, the therapeutics should be shaped with reference mainly to that circumstance.

The report on Medical Literature is from the pen of Prof. A. B. Palmer, Michigan. It covers about forty-four pages, with an *Appendix* of twelve pages. The author has embraced within his review everything of an indigenous character that has been issued from the press for the last three years, there having been but partial reports for several years past. Of course the author has had to content himself with a discussion of the general character of period-

ical medical publications of the United States, "referring to particulars only so far as necessary to illustrate general views."

The report covers too much ground. It would have been much better, and more creditable to the author if he had attempted less. Still we take pleasure in stating that it is one of the best, if not the very best, we have had. The opinions expressed in regard to our periodical literature, and what the author styles "Original Medical Publications," indicate a good compass of information and more than an ordinary amount of judgment.

The Appendix is valuable for the information it contains in regard to "home and foreign productions," number of periodicals in the country, reports of asylums, monographs, etc. The reader will be surprised to see the large number of foreign books re-published in this country within a very short period. The same practice extends to periodicals. Notwithstanding we have thirty or more periodical journals of our own, we re-publish and circulate four of foreign origin—the *London Lancet*, *British and Foreign Medico-Chirurgical Review*, *Braithwaite's Retrospect*, *Ranking's Abstract*.

In concluding our notice of this report, we cannot avoid the temptation to suggest that we have an endemic in certain parts of our country for *book-making*. Teachers of medicine are very apt to think that their usefulness will not be appreciated unless they get up a book on the department they have in charge. Some, indeed, do not imagine that they have served the generation, without getting up about one on each of the departments. This mania for book-making is one of the reasons why our books do not supersede those of foreign origin. If we had fewer books, written on more capital, their success would be better. Any one can compile, but there are few who can write from what they know. Mere compilations are soon appreciated and avoided, while works that show the knowledge and labor of the author, live always.

S. M. Bemiss, Ky., contributes a report on the Influence of Marriages of Consanguinity upon offspring. This report takes up more than one hundred pages and is founded upon eight hundred and seventy-three observations made in twenty-five of the States of the Union. The observations have been arranged upon tables in classes corresponding with the estimated grades of relationship, as follows:

1. Instances of marriage, or incestuous intercourse between brother and sister, or parent and offspring.
2. Instances between uncle and niece, or between aunt and nephew.

3. Marriages between blood relations, who are themselves the descendants of blood relations.

4. Marriages between double first cousins.

5. Marriages between first cousins.

6. Marriages between second cousins.

7. Marriages between third cousins.

8. Marriages irregularly reported, all first cousins.

Our readers will recollect that we published in the Journal some time since, from the pen of Dr. Bemiss, an article on the same subject. In the report before us the author says: "I feel satisfied however that my researches give me authority to assume that over *ten per cent.* of the deaf and dumb, and over *five per cent.* of the blind, and near *fifteen per cent.* of the idiotic, are the offspring of kindred parents, or of parents themselves the descendants of blood intermarriage."

The consanguinity tables comprise 789 marriages of cousins, 246 of which have given issue to deaf and dumb, blind, idiotic, or insane children.

From data before the author, he estimates that there are now in the United States 6,321 marriages of cousins, giving birth to 3,909 deaf and dumb, blind, idiotic, and insane children.

"A very cursory examination of the tables of my report," the author remarks, "will suffice to show that *pari passu* with the increment of the same blood, the sum of defects of offspring is likewise increased."

If it is true, as suggested in this report, that a large proportion of those who are maimed intellectually and physically, owe their condition to multiplication of the same blood by in-and-in marrying, how are we to explain the increase of mankind from the original Adamic stand point? or from the Abrahamic? In the first instance in-and-in marrying was a necessity; in the other a patriarchal usage adhered to with religious pertinacity. Again, nothing appears to be more in consonance with the right expression of fact, than that races, strongly characterized, cannot amalgamate without mental and physical degradation. The offspring may, intellectually, rise above the *inferior* race, but physically they will fall below it. So that, so far even as the inferior race is concerned, it is injured by amalgamation. The superior one suffers both mentally and physically. From the facts therefore of Dr. Bemiss' report against in-and-in marrying of the same race, and those elicited on the amalgamation of different races, there seems to be a paradox. Nature, perhaps, abhors too

close a relationship on the one hand, and is dissatisfied with too distant an one on the other.

E. Andrews, of Illinois, makes a report of some length on the "*Functions of the Cerebellum.*" The report is grounded in part on the author's own researches. That the reader may get the drift of Dr. Andrew's researches, we offer a remark or two on the cerebellum. Located within the cranium, the cerebellum, from a *priori* probabilities, has a relation to sensation, voluntary motion, and the instincts. It, as has been repeatedly shown, is insensible to irritation, and may be all cut away without producing pain. If, however, the tracts (*crura*) of nervous matter which connect it with other portions be pinched, the most acute pain and suffering is produced. If sliced off, or disorganized by disease, there is more or less loss of sensibility; yet animals from which it has been removed were able to see, hear and smell. Irritation of it seems to produce no movements of any kind. Flourens and Bouillaud extirpated the cerebellum of birds by successful layers. These experiments were followed by feebleness and want of harmony of movements. The animals lost the power of flying, walking or standing, though they retained sight and hearing. The same experiments repeated on other animals were followed by similar results. As a consequence of these experiments it has been inferred that the cerebellum has nothing to do with general or special sensation, nor with voluntary motion; but that it is the organ for the *co-ordination* of voluntary movements—that is, it is the source of power which presides over, not the action alone of a single muscle; but the *combined* action of muscles. This theory has been repeated in all the late text books.

The paper before us of Dr. Andrews does not in the general controvert the doctrine to which we have alluded. He says, "the muscular system of mammals and birds is the part upon which the cerebellum obviously exerts most of its influence whatever that influence be." He doubts, however, its office of co-ordination. "Although it may be true," he remarks, "that through it the mind co-ordinates the muscular action, yet that is not true which is stated by Carpenter and others upon the subject, viz: that the size of the cerebellum is in a direct ratio with the number and variety of co-ordinated movements which the animal is capable of exercising.

Phrenologists have claimed the cerebellum as the organ of the sexual instinct, or amateness. This notion has had but few, if any, facts in its favor. While against it, there have been some of a very

conclusive character. Cruveilhier and Longet give a case of complete disorganization or absence of the cerebellum, without loss of sexual passion. M. Flourens removed the cerebellum from cocks without destroying the sexual desire, though they were incapable of gratifying it.

The report on the *treatment* of cataract, by Mark Stephens of New York, presents but little, as far as we have observed, except what may be found in the books. It is, however, a very complete digest.

The author goes against a repetition of the operation of couching, which he believes unnecessary, all being gained by a single operation, if the lens has been well exposed to the action of the aqueous humor, that can be by repeating it. He answers to the question "*Is it proper to operate when one eye is sound?*" in the affirmative. This, to say the least of it, is *fancy* surgery. Taking even the best view of it, by supposing the operation successful, the focal distance of the eyes would, of course, be different, and the vision of the patient, as a consequence, imperfect in the power of definition. Dr. Stephens gives a case operated on by himself, in which, it is alleged, that this contingency did not follow. Still, who that knows any thing the crystalline lens, can believe that its removal would make no difference in the refractive power of the eye? The position, therefore, of Dr. Stephens, is simply ridiculous. He might just as well contend that one of the combinations could be removed from the object-glass of a microscope without interfering with the focal distance of the glass.

The *Report on the Medical Jurisprudence of Insanity*, by C. B. Coventry, of New York, covers about fifty pages, and is a document that seems to be pretty carefully compiled.

The first part of this report comments very liberally on the prevailing ignorance of insanity. We are told that the people know nothing about it; that lawyers and judges are equally ignorant; and that, as a consequence, "it must be admitted that in a large proportion of cases, the verdict of a court is dictated more by popular influence or prejudice, or by the talent and ingenuity of counsel, than by the stern dictates of justice."

The author notices the various definitions given of insanity, and prefers the following: "*Deranged or defective mental manifestations, arising from defective organization, imperfect development, or diseased action of the whole or part of the brain.*" Dr. Brigham

says, "Insanity, in most cases, is caused by slight disease of a small part of the brain. In most cases of protracted insanity, some traces of disease are found on a post mortem examination."

The author invokes the theory of Gall and Spurzheim, viz: that the brain is not a single organ, but a congeries of organs, to explain how it is that in many cases, only a few of the faculties of the mind are disordered. Before this theory is pressed any further, it might be well enough for its advocates to tell us the particular part of the organ devoted to memory, the part devoted to judgment, to volition, etc. How it is again, that we know nothing of the existence of either of the faculties enumerated, independently of sensation? "Every thing," says Aristotle, "that is in the mind, was previously in the senses." The old philosopher's notion has been endorsed by the most able ideologists of every age since his time.

A good while ago, the innumerable phenomena which constitute the human understanding, were regarded as but modifications of the faculty of *Perception*. *Sensibility*, by which we receive impressions from within or without; *Memory*, or the faculty of re producing impressions or sensations previously received; *Judgment*, or the faculty of perceiving the relations between sensations, *Desire* or will; were all regarded as nothing more than modifications of the faculty of *Perception*. Thus taught Magendie, a quarter of a century back. What has since been added to this worth recollecting? Phrenologists have proposed a large addition in the way of faculties—intellectual, moral and animal; and, as all know, have proposed certain portions of the periphery of the cerebrum as their seat. But every day's experience furnishes evidence of the inconclusive character of their reasonings. There is no secretive organ in the body but what, in one sense, has a plurality of functions, but what elaborates from the blood submitted to it, quite a number of compounds differing from each other. We say the kidneys secrete urine—that their primary office is to draw from the body its surplus water. We say, also, that it is the office of the mammary glands to secrete milk for the nourishment of the young offspring. But look at the variety of substances in urine besides the water—urea, uric acid, coloring matter, salts of soda, potash, lime, magnesia, ammonia, and a trace of silica. In milk, the number of elementary substances is still greater. Here we have a compound containing all the elements necessary to the building up of the organism. The

albuminous group of nutritious articles is represented by the caseine ; the oleaginous, by the butter ; the aqueous, by the water ; the saccharine, by the sugar of milk. Besides, milk is rich in phosphates for building up the bones and nervous system. We might allude to all the other glands of the body, compound and simple, even to the mucous follicles, and show that they separate from the blood, not merely one simple principle, but a great number, arranged together in the form of compounds.

Why not, therefore, carry the doctrine of *speciality* of function to all the secretory and excretory glands of the body? Why not, for example, say that we have a cell in the liver especially set apart for the secretion of glycocholic acid, another for the secretion of taurocholic acid, and another for cholesterin. This would not, however, be making any progress, for the substances noticed are themselves very complex compounds.

Now, is there any thing more unreasonable in supposing the cerebrum as capable of performing different offices, all having a necessary relation to each other, than there is in supposing a gland capable of separating different substances from the blood?

The author's classification of Insanity is after that of Guy, in his work on Medical Jurisprudence. 1st. *Amentia*, including Idiocy, Cretinism and Imbecillity; 2d, *Dementia*, consequent on mania, mental shocks or injuries of the brain, (a) senile ; 3d, *Mania*, (a) general, (b) intellectual, (c) moral. This, it will be observed, leaves out cases of insanity resulting from onanism, which do not seem properly to come under any of the above divisions.

The subject of *Moral Insanity* is broached in this report. We see nothing, however, that throws any additional light on the question, "how far this form of insanity should excuse the commission of crime?" Most of those who are acquainted with the subject think, that as long as the individual is able to control his actions, and possesses sufficient intelligence to know the consequences of his actions, and is not laboring under any delusion, it is difficult to say how far he should be excused. Several forms of moral mania are given: *Cleptomania*, or propensity to theft and lying; *Pyromania*, or propensity to incendiarism; *Suicidal Mania*; *Homicidal Mania*.

Tests of Insanity.—The report posts up the tests that may be relied on to determine the existence of insanity. We select those of most value:

“1st. Every thing should be learned in regard to the previous history of the individual; and as of prime importance, the education he had received.

“2d. The standard by which an individual is to be judged is *his former self*.

“3d. The maniac differs from the sane, not from a loss or defect of any of the faculties, as in idiocy and imbecility, but in excessive action in some, and in exercising them differently. * * It is not mere eccentricity that constitutes insanity, or that a man feels, thinks and acts differently from other men. The senses are often changed, sometimes preternaturally exalted.

“4th. The insane antics of mad men are usually the result of their delusion.

“5th. The acts of mad men, which are the result of delusion, are often such as no sane man would deem proper to accomplish the object in view.

“6th. The violence of the insane is often the effect of his delusion, and not of mere passion.

“7th. Insane patients of a reserved disposition, unless impelled by some powerful motive, have often the power of concealing their delusion.

“8th. The acts of an insane man often evince the same forethought and preparation as those of the sane.

“9th. The insane, notwithstanding their proverbial cunning, are easily imposed upon.

“10th. Insane persons are often conscious of their condition, and understand the legal relations in which they are placed.”

The author discusses briefly the question, “*How intoxication affects responsibility for crime?*” He reiterates the doctrine very current now, that insanity, when produced by intemperance assuming the form of delirium tremens, affects responsibility in the same way as insanity produced by other causes. The argument that because it arose from *voluntary* intemperance, is regarded as having no force, as a large proportion of the cases of insanity from other causes arise from vices or follies voluntarily committed. Insanity, immediately produced by intoxication, does not destroy responsibility, except in cases where, from previous injury of the brain, or from disease, or peculiarity of constitution, intoxication ensues from a quantity of liquor which would not affect a person differently constituted.

We have thus passed over the principal parts of this report. And we may say in conclusion that the author has presented a very good summary of what is regarded as of most interest on the subject.

In a conversation, not long since with a gentleman of long experience in the management of the insane, he remarked: "I have often been struck with how *little* they (the insane) know; and with how *much* they know. When talked to on matters connected with their delusion they seem to know nothing, but on all other matters they are intelligent." This gentleman remarked that while having charge of one of the asylums of our State, he not unfrequently found that when he needed information on minor matters with which the lunatics, previous to their derangement had been acquainted, he could consult them with advantage, provided the subject involved nothing connected with their own form of trouble. For example, if a horse sickened or became unruly, it was only necessary to hunt up among the patients a man whose avocations had made him acquainted with horses and their diseases; and the information desired was obtained just as well from him as if he had been perfectly sane. So in regard to legal questions. A patient that was in the asylum could give with great accuracy all the law bearing in any way on the case at issue, and tell beforehand what, in all probability, would be the decision of the courts.

The present age has nothing of which it may with more propriety be proud, than its knowledge of insanity. History fails to inform us of the existence of any people who have had any proper conceptions of the subject. Not being comprehended, of course no adequate provision was made for the treatment of the disease. Previous to the time even of Pinel, insanity was considered almost, if not entirely, an affection of the intellect, or of the reasoning faculties. Frieks and lesions of the affective faculties were scarcely at all recognized.

If, therefore, the present generation should be known to posterity only by its architectural monuments for the care and treatment of the insane, as the ancient Edomites are known to us only by the ruins of Khashne, their theaters, and catecombs at Petra, we would have no cause to complain of the opinion that might be formed of us. An index would be furnished by which the character of our civilization would be fully appreciated.

We must here close our notice of this volume. To quite a number of papers, including the "*Prize Essays*," we are unable now to pay any attention.

The Science and Art of Surgery, a treatise on surgical injuries, diseases and operations. By JOHN ERICHSEN. An improved American edition, from the second enlarged and carefully revised London edition, illustrated by four hundred and seventeen engravings on wood: Blanchard & Lea.

The first edition of this work is now extensively in the hands of the profession. This fact supercedes the necessity, if it does not indicate the impropriety, of an extended notice. It appeared about four years since and is already exhausted. We now discharge a pleasing duty in announcing a second edition, materially enlarged, and thoroughly representing late improvements.

After careful and frequent perusals of Erichsen's surgery, we are at a loss, fully to express our admiration of it. The author's style is eminently didactic, and characterized by a most admirable directness, clearness and compactness. These traits have enabled him, in a volume of about 1000 pages, largely occupied by wood cuts, to present what is, in many respects, the most full and complete systematic treatise, on the subject of which it treats, in the English language.

As illustrative of these features of the work, we name what is, perhaps, the most vulnerable chapter in it, that on inflammation. The author disposes of this intricate topic in forty pages. Yet by avoiding the polemic aspects of the subject, a careful and discriminating rejection of what is unsettled and uncertain, and an admirable exercise of what we regard as his peculiar talent, he has succeeded in embodying, in this brief space, almost everything important, that is known on the subject. The doctrines of the chapter are, furthermore, thoroughly modern, having received a very decided and characteristic impress from the extensive and able observations of Paget.

The present edition contains about 100 pages of new matter. The discussion of many topics is so altered as to be essentially new. In this connection we might mention the discussion on the subject of morbus coxarius, and that on flexion of the knee joint. Among the improvements inserted we notice, of American origin, Reed's method of reducing the femur by manipulation, and Crosby's mode of reducing dislocations of the proximal phalanx of the thumb. Cassaignac's ecraseur, in its application to the extirpation of tumors and excision of the tongue, is presented with illustrations.

In the discussion of the subject of foreign bodies in the air passages and ovariectomy, the book of Professor Gross, and the essay of Dr. Lyman of New York are brought prominently into requisition. In fact, a catholic spirit, the most ample literary resources, and great breadth and scope of view, as evinced by a thorough familiarity with, frequent allusions to, and impartial use of American, French, German, Russian and other authorities, characterize the work throughout.

A feature calculated to commend the work to the profession is the abundance of its original illustrations. Though as specimens of art, they are not of a high order, they have, with little exception, the merit of originality, and delineate very fairly.

We commend the work to the profession, as one of rare ability and excellence, and that no practitioner, burdened with the responsibilities of surgical practice, can afford to dispense with.

As to the execution, perhaps the highest compliment which it could receive, is, that it is in the best style of the house from which it emanates. H.

A Treatise on Fractures. By J. F. MALGAIGNE. With one hundred and six illustrations. Translated from the French, with notes and additions, by JOHN H. PACKARD, M.D. Published by Lippincott & Co..

But few books, laying claim to completeness, have been written on fractures as an exclusive subject, either in ancient or modern times. Yet it is not to be supposed that as common and serious injuries as these failed to elicit a full share of attention, at the hands of surgical writers. A long list of the most eminent names in the history of the profession might be adduced, as intimately associated with this department of surgery. Yet their productions were, for the most part, fragmentary. Among our Gallic brethren, although Desault, Verdué, Duypuytren and others have written largely on the subject, we believe the work before us is the first that claims to be a complete and exclusive embodiment of what is known on the subject. In this particular they are in advance of their British neighbors. Although the latter have produced a number of special treatises on the subject, such as that of Amesbury, Lonsdale, Stanley and R. W. Smith, none of them are full and complete as is the work under consideration.

The book before us is a well executed octavo of seven hundred pages. The first two hundred and eighty-seven pages are occupied with the general subject, under the separate heads etiology, varieties of fracture, general semiology, course and terminations, diagnosis, prognosis and treatment. The body of the work is occupied with the very full and detailed discussion of the ordinarily recognized special fractures.

The varieties recognized and described are as follows: First, the *incomplete*, subdivided into the fissured, incomplete properly so called (consisting of bending with incomplete fracture in the long and depression in the flat bones,) splintered and perforated.

Complete simple fractures are divided as follows: Transverse, serrated, oblique and epiphyseal. Under the head of *Multiple* fractures are designated fractures with splinters, fractures with several fragments, fractures by crushing and fractures involving several bones at once; and finally, *complicated* or *compound* fractures constitute a fourth general division.

This classification, as the standard of diagnosis in actual cases, is to some extent utopian. But for the purposes of the author, it is at least convenient, in as much as under these several heads he is afforded the occasion for presenting anything peculiar characterizing these several varieties. In connection with the discussion of incomplete fractures, properly so called, he raises the question as to the possibility of uncomplicated bending in long, and depression in flat bones, &c. Again, under the head of the epiphyseal, we have a rather full history of observations on the subject of disastasis, the mode of its production, the age liable, and the question of distinctive symptoms, mode of union and treatment, the result of which seems to be, in the author's mind, a virtual rejection of the variety in actual practice, on account of the absence of cognizable distinctive features. Under the head of course and terminations, we have a description and history of the more prominent kinds of appliance, and very full discussions of various practical questions, such as the proper time for applying and removing apparatus, the movements which may be allowed the patient, theory of ankylosis following fracture, pseudarthrosis after fracture, formation and transformation of callus, hindrances to consolidation, &c. These we regard as among the most interesting and important discussions in the book.

Under the head of non-union, the author adduces the views of M. J. Cloquet, in regard to a source of delay in connection with the

immovable or starch apparatus, which we do not recollect to have noticed in any other treatise, but which had previously been impressed upon us, by observation in our practice, as perhaps the most serious objection to that mode of treatment. Probably most practitioners, who have treated a dozen broken legs after the plan of Seutin, have observed that, in the latter part of the treatment, the limb becomes remarkably soft and flabby; that its temperature is impaired, its circulation and nutrition imperfect, the part tending to atrophy with more or less edema, assuming a white waxen appearance, the epidermis presenting *ptyriasis*, or in well marked cases *phlyctenula*. This condition Cloquet attributes to the conjoined effects of non-use, pressure, and exclusion from light and air, mainly the latter. He regards it as a fruitful source of non-union, and designates it as local scurvy. It has been impressed upon us that the grade of action in parts thus situated, was such as not to allow of a vigorous reparative process. This would seem to require an unrestricted circulation and nutrition, and a high grade of vitality about the seat of the fracture. This incident is worthy of careful observation.

The plates are, for the most part, illustrative of specimens which the author has collected from various sources, and equally so of the imperfections characterizing treatment. The translator remarks in his preface, that "for greater facility of reference, they have been collected at the end of the volume, instead of being interspersed throughout the text." They are fine specimens of wood engraving, on superior Bristol board.

The book presents a liberal amount of original observation and is indicative of great industry, honesty and erudition, on the part of its author, and abounds in interesting and important historical details. Without, however, attempting to assign the proportion of responsibility which belongs respectively to the author and the translator, we feel compelled to say that the style of the book is not characterized, in an eminent degree, by directness and perspicuity. This has been impressed upon us as perhaps the only feature tending to mar its reputation as a great work. In every other particular it is a model of scientific literature. Notwithstanding this, and the fact that the original publication was made only about twelve years since, by virtue of it the author's influence, in the surgical world, is already, in a very important sense, ubiquitous. The constant allusions to it in text-books, as an authoritative work,

are such as to constitute the highest compliment which any work can receive.

No practitioner who is responsible for a large amount of practice, in its department, can afford to do without it.

H.

A Manual of the Practice of Medicine. By T. H. TANNER, M.D. F. L. S. Author of a Manual of Clinical Medicine, and Physical Diagnosis, etc., etc.; Licentiate of the Royal College of Physicians; late Physician to the Hospital for Women. First American, from the Third Revised London Edition. Philadelphia: Lindsay & Blakeston, 1858. (For sale by Randal & Aston.)

There seems to be a rage just now for *Manuals*. Each department of medicine has its Manual. Why is this? Can't as much time be afforded now to look through elaborate treatises as formerly? Or are these useless? Is it unnecessary just now to buy a book that holds its subjects before the mind until they are entirely exhausted?

This is a fast age; and besides, there is no doubt about our having much in medical literature that is worse than redundant. Still, it is a question whether what we have can be, without damage, compressed into less than one-fourth of its former dimensions. Take Practice, for example, of which this book treats, and is one-half of what we have on this department by Drake or Watson, useless? We think not. If a writer attempts to give a portrait of a disease, he should not content himself merely with the outlines, because these are liable to misguide; but should paint the picture so complete, that the original may be easily recognised.

Hand-books are thought to be applicable to the student. Perhaps they are in some respects. But may they not prove injurious by inculcating short-cuts, and destroying the taste for thorough, elaborate investigation. Bad practices, as some one has said, are harder to *unlearn* than to learn.

The little volume before us is a model in its way; terse, and as far as possible, comprehensive. It is also up to the very latest researches. But there is not enough of it for practical purposes. It is unnecessary to those who are well read; for they have it all

and much more besides ; while to the student, it is not sufficient. More than all, the dogmatisms, inseparable to such condensation, are far from being palatable.

The work commences with a chapter on *Inflammation*. This is disposed of in some seven pages. We have looked through this chapter, supposing it to be a fair specimen of the author's performance. We see nothing new on the *causes* or *terminations* ; but there is something on the treatment which, though not new, deserves a passing notice. The *antiphlogistic regimen*, so long in vogue, is called in question, as having always been wrong, or as being not adapted to the types of modern diseases. Our author, with Prof. Bennett, adopts the former hypothesis, and says, that inflammation cannot be cut short, and that our knowledge of physiology, pathology and therapeutics, agree in suggesting to simply *guide* the morbid process to a favorable termination, just in the same way as we, at present, try to conduct cases of typhus, small-pox, scarlatina, through their natural progress, without making heroic efforts to cut them short. In treating inflammation, continues the author, the object should be to support the vital powers instead of lowering them, and it should further be to promote the excretion of effete products.

In support of this plan of treatment, the author cites its success in the hands of Dr. Bennett, physician to the Royal Edinburgh Infirmary. Dr. B. treated 65 cases of pneumonia, of which number 62 were dismissed cured, and three died ; that is, one in $21\frac{2}{3}$. These cases, so far as character of disease and complication were concerned, were supposed to present a fair average.

This shows a success much greater than that of Louis, who treated 107 cases of the same disease by bleeding and tartar emetic, with a loss of 32 ; or than that of Rasori, in the Hospital of Milan, who treated 648 cases by large doses of antimony, with the loss of 143.

But is such showing conclusive in a matter not only important, but where there is room for a great variety of circumstances calculated to effect results. Is there no fallacy here to start with in the number of cases treated by Dr. Bennett ? Should our views be revised on evidence derived solely from 65 cases ? We had supposed that conclusions touching the value of any plan of treating disease required a much greater number of cases to be entitled to confidence. Again, do the cases of Dr. Bennett present every thing in the way of age, sex, habit of body, endemic influences, portions of pulmonary apparatus affected, extent of disease, and complications ? The pneu-

pneumonia of old persons is a very different disease from what it is in children, or even in adults. In the aged the inflammatory process diffuses itself over the pulmonary surfaces with facility, and hence the great mortality in this class. In children the disease is apt to be lobular, and the prognosis, as a consequence, favorable. In the former the treatment must be supporting from the commencement; in the latter, where the evidences of repletion are obvious, it should, we had supposed, be antiphlogistic.

We have thus noticed the disease as connected with the extremes of age; and we are certain that we are not transcending the limits of truth, or the most trustworthy observations when we say that the treatment not only differs, but is exactly opposite.

We might, if we had space, go on and point out how other circumstances call for a modification in treatment. An adult of full habit and presenting evidence of great engorgement of the lungs, the disease being primary, would be benefitted by remedies calculated to lower the action of the heart and arteries; whereas the same individual, if emaciated and suffering with the disease as a complication, or as a mere extension of morbid action from some other part, would not only not be benefitted by the plan just mentioned, but would most likely be injured. Again, the pneumonia of malarious districts requires a special system of therapeutics. Here it may be remarked, that it is not those articles or measures that impart tone or take it away, that cures the disease, but quinia, of the *modus operandi* of which we know nothing. In short, what we find true of pneumonia confirms the medical maxim, "*No two cases are alike.*"

We confess, therefore, that we are unprepared to adopt the views of Bennett in regard to inflammatory diseases without other evidence of their correctness than what is furnished by the results of 65 cases of pneumonia, or his statement, that those practitioners having the greatest amount of experience, combined with the greatest knowledge of physiology, pathology and therapeutics, are now agreed that the antiphlogistic plan is wrong.

It will be noticed by the reader that the evidence we have been noticing is of the empirical kind, the back-bone of all medical evidence, but at the same time liable to an almost infinite variety of fallacies. That empirical knowledge be worth any thing, the observations should be long continued under every possible variety of circumstances; they should be made by eyes, ears, that have been carefully disciplined, that have been trained by long use, with a practiced judgment.

Pathology we should suppose ought to have something to do with the treatment of disease—at any rate this was formerly so axiomatic, that every one writing on the subject took structural changes very fully into consideration. We do not understand Prof. Bennett to ignore pathological considerations in the treatment he proposes for acute inflammation; but what he does is the same in effect. He denies the generally received theory of the process and substitutes one in its place that he himself has invented. This circumstance, if no other, in our judgment, ought to have the effect of placing his notions of treatment at a discount.

We have had the medical mind for twenty centuries, or more, at work on the subject of *inflammation* and so far as treatment is concerned, the general tendency has been during all this time to look upon the views of Hippocrates with favor. His great mind seemed to grasp the leading features of the disease; and he is bold in the expressions of his opinion of the value of the anti-phlogistic plan in the proper cases of pneumonia.

We have no great deal of veneration for much that is found in the ancient records of medicine. But when we see a plan of treatment that has lasted for centuries, and that has withstood the shocks of innovation under a great variety of circumstances; and that, moreover, seems to be pointed out by the most enlightened views of the nature of the structural changes, we confess an unwillingness to discard it, except upon the most conclusive evidence, that there is something better.

Of Nature and Art in the Cure of Disease. By Sir JOHN FORBES. S. S. & Wm., 389, Broadway, New York. 1858.
Brief Expositions of Rational Medicine, to which is prefixed the Paradise of Doctors. A Fable. By JACOB BIGELOW, M. D., late President Massachusetts Medical Society. Boston: PHILLIPS, SAMPSON & Co., 13 Winter Street. 1858.

The first of these works, *Nature and Art in the Cure of Disease*, was noticed some time since in our Journal; the other one, by Dr. Bigelow, of Boston, has been on our table for some months. The scope of both is the same. Both are down on what they are pleased to term the *heroic method* of treating disease. They also agree in leaning very strongly to the “expectant method.”

It is very probable, that here, in the United States, where dis-

eases are, in many localities, very bold, and, from the commencement, dangerous, we err sometimes in doing too much. But, is an error here any worse than one in the opposite extreme? A careful "expectant" plan in many diseases, particularly those of a chronic character, enables a physician to study the natural history of the complaint, enables him more clearly also to see what assistance he may expect from nature. This plan, therefore, has always been adopted by those who have understood themselves. It is just what common sense could not fail to suggest. We have, however, a class of diseases of a very different character; diseases that sometimes jugulate nature, if not interrupted, in a very few hours. We allude, among others, to our "congestive intermittents." What is to be done with such? Must the practitioner stand over a case of this kind, studying the natural history of the disease, and looking to see what nature is able of herself, to accomplish? or "pitch in" and rescue the patient from danger consequent on a second paroxysm?

The works before us have been written with some capital in the way of experience, as any one can see who peruses them; but not with all the experience necessary. We suppose there are fashions in medicine, as in many other things; but it is very questionable whether these fashions are always purely artificial. Medical men have been found, in certain periods past, relying very much on purgatives, blood-letting, mercurials, emetics, and the like. But who is prepared to say that such practice, under the circumstances, was wrong? Who is prepared to say that it was not the best that could have been instituted? Was it because of its injurious effects, that a particular mode of treatment was abandoned, or because of a change in the character of diseases? The mild plan, recommended by the works before us, was tried for a while during the early part of the present century, at the suggestion of STAHL, but was, by general consent, abandoned as "*a meditation on death.*"

We by no means wish to be understood as endorsing the heroic practice in all cases, even of acute disease. Some of these are, as all know, amenable to bold, vigorous treatment, when well timed; others are not, because of a cycle of changes through which they will run irrespective of all known remedies. Then we have the complaints known as chronic, to which a medication is applicable that is neither heroic nor expectant, but one that restores to the natural state. The quantity of medicine used, may be much or little, but it must be sufficient for the purpose. Nor do we wish to be understood as ignoring the curative powers of Nature. Every one has

confidence in the *vis medicatrix naturæ*, and knows that it is equal to a certain class of emergencies, but it is because it is not always equal, that the necessity for artificial interference has been recognized by both civilized and barbarous nations, and by the Creator, who has created our most heroic remedies ready for use.

The negative plan of treating diseases, and to which the two works before us lean, as previously intimated, is not new. It may be, for aught that is known, better adapted to what happens in our day, than it was when Stahl tried it. Still, we have no idea that it will be productive of any benefit, except that it may have a tendency to correct over-dosing where it exists.

It will be noticed, by those who have read the works before us, that there is a leading sophism that pervades almost every page of both of them. They object to positives, efficient medication, because many of the more powerful articles of the *materia medica* have been abused. Should we leave off the practice of eating meat, because some make gluttons of themselves? Such a course would be just as reasonable as to leave off, during sickness, the use of what the Creator has provided in the way of remedies. An individual, to receive proper nourishment, requires daily so many ounces of food and water, and the quantity is positive. So an individual, the subject of disease, requires medicine in such quantities as will destroy the disease, and allow the normal actions to resume their sway.

Age is valuable, but it has its drawbacks. It is the transition stage between manhood and second childhood; and while it protects against the errors of early life, it is often found to predispose to those that surround the individual in his declining years. In their old days, Drs. Forbes and Bigler, in our judgment, have been to some extent victimized with the nonsense of Homœopathy.

PART FOURTH.

EDITORIAL.

Discussion in the New York Academy of Medicine. Dr. Green's use of the Probang in the Whitney Case.

In December last (14th,) a patient by the name of Whitney, complaining, amongst other things, of an affection of the throat, called at the office of Dr. Green (who has made himself extensively known to the reading public by his use of the probang,) and had his throat medicated. At the time, and while the patient was at the office, no complaint was made. After he went home he sent for his family physician, Dr. Beales, and complained to him that Dr. Green had injured him seriously. Soon after Dr. Beales saw him, emphysema over the chest and neck made its appearance and the patient died on the 7th day after the use of the instrument. The patient being the heir an to estate worth five million of dollars, his friends after his death and a portion of the community, charged Dr. Green with having killed him. A post mortem was made by Drs. Beales and Mott, (Prof. Valentine Mott.) This was drawn up by Dr. Mott, and with the history of the patient's illness, submitted to the Academy of Medicine where the affair underwent an investigation. After all the facts had been elicited thoroughly the academy acquitted Dr. Green of any blame whatever.

We have had no prepossessions in favor of Dr. Green in the use he has made of the probang, and have so expressed ourselves in the previous numbers of the Journal. We will do him the justice, however, to say that he has called attention to the practicability and safety of topical applications to the larynx and trachea and for this he deserves credit. Like all experimenters he has become without any doubt too enthusiastic, and has used his probang for diseases and forms of disease to which it was in no reasonable sense adapted. In, however, the case before us he was we think improperly blamed, and it pains us to relate the fact that the vulgar prejudices against him were at the outset countenanced by Drs. Beales and Mott.

The post mortem revealed an opening near the bifurcation of the bronchi, a cavity in the upper part of the left lung, and a hole leading from this cavity that extended through the pleura pulmonalis and pleura costalis; and present also was inflammation and hepatisation of part of the left lung. Besides these lesions, *an abscess*

containing pus was found in the deep cervical fascia between the larynx and pharynx and communicating with the latter by an orifice large enough to admit the finger. This abscess was about the size of a large hen's egg, and during the attendance of Drs. Beales and Mott for a period of seven days on the patient was not noticed by either of them.

We have said that Drs. Beales and Mott favored the idea of the people, that Whitney's death was due to Dr. Green's use of the probang. This, if we had no other evidence of the fact, is very obvious from the bearing of these gentlemen before the Academy where the matter was discussed. They both exhibited much more feeling in their verbal statements than is required in the communication of facts. Besides, their account of the post mortem is, to say the least, pedantic. They stand convicted, nevertheless, by their written statement of the history of the symptoms and the post mortem of having failed, during the life of the patient, to recognize the presence of the *pharyngeal abscess*.

We have no intention, from the data before us, of expressing an opinion on the cause of Whitney's death. With such lesions as were present, either of which was adequate to such an event, we regard it as recklessness for any one to attempt to discriminate. The opening in the left bronchus, communicating with a cavity in the lung as large as a small walnut, and again with an orifice in the pleura pulmonalis and pleura costalis which gave rise to the emphysema—may have caused the patient's death. But were these lesions due to the use of the probang, armed as it was with sponge and used with ordinary care? A physician who was present at the operation stated before the Academy that the operation was not followed at the time it was performed with any uncommon complaint from the patient. Could the left bronchus have been perforated, the instrument extending into the lungs, thence through the two pleural membranes, without having, at the time, produced evidence thereof in the way of pain and other unmistakable symptoms?

The patient had an abscess as before suggested, on his neck, as large as "a large hen's egg," and communicating, by an opening sufficient to admit the finger, with the pharynx. What caused this? When did this pharyngeal abscess commence? What relation had it to the cavity in the lung? What to the general health of the individual? Was it sufficient of itself to have caused the death of the patient? Such questions should have been answered, it appears

to us, before coming to any conclusions, as it respected the cause of Mr. Whitney's death.

The progress of this case has developed certain traits of human nature in quarters not, by us, previously suspected. Persons not acquainted with the many contingences of medicine are often to be excused for crude notions, and hastiness in forming opinions. They get up prejudices against physicians, that are annoying, and it seems no amount of professional service or reputation secures exemption. Prof. Gibson's case is in point. He used an exploring needle while in Rome to ascertain the state of things in the orbit of the eye of the man Crawford. Unfavorable symptoms followed the operation; and the relatives and friends of the patient accused Prof. Gibson in such a manner, that, although he possessed an enviable reputation as a surgeon for nearly half a century in the oldest and most renowned school of America, he was compelled in self-defence to have his practice in this case endorsed by European surgeons. Nothing, we repeat, is more common than for the people to find fault with medical men and hatch up against them all kinds of charges. Such things, fortunately however, soon die off, unless medical men can be found ready to chime in and give them currency. It seems that such is too often the case. The venerable Dr. Mott with all his years it seems was not above this weakness. "*Humanum est errare.*"

Recent Improvements in Practical Surgery. Excision of the Tongue.

Mr. Syme of Edinburgh recently performed this operation in two cases after the plan proposed, and practiced in a single case, by M. Sedillot. An incision was made through the lip, and over the chin, to the body of the os-hyoides. With saw and pliers the jaw was then divided at the symphysis. The two halves were then held aside, thus giving ample room for the dissection of the parts back to the os-hyoides near which the tongue was separated, the lingual arteries having previously been tied near the cornua. Both the patients died of inflammation of the lungs after the lapse of about a week.

Mr. Syme, with commendable boldness, announces these results to the profession, holding up these cases as a beacon, and expressing the opinion that "there should be no hesitation in deciding against the repetition of the procedure."

A Paris correspondent of the Times and Gazette, announces the successful extirpation of this part, on a different plan, by Ricord. It was effected, without dividing the symphysis, by the use of the *écraseur*. This case seemed to progress favorably for a length of time, but cicatrization progressing, the patient lost his regained articulation, and dysphagia became extreme, threatening inanition, when the patient died suddenly of latent pneumonia.

On the other hand the same correspondent states that patients whose tongues have been extirpated, have been exhibited before the Academy of Medicine, in numbers sufficient to guaranty that the operation is not, in itself, necessarily fatal. *Maissonneuve* performs it very much as in *Syme's* cases, only that the organ is separated by the *écraseur*.

Treatment of Aneurism by Digital Compression. In the January number of the N. A. Med. Chirurg. Review, Dr. D. W. Gross gives what purports to be a report, in brief, of all the cases that have been thus treated. The important facts, including the results, are summed up in the following table :—

Variety.	No. of Cases.	Cure.	Failure.
Popliteal.....	15	10	5
Femoral.....	4	3	1
Inguinal.....	2	..	2
Arterio-Venous.....	2	2	..
	<hr/> 23	<hr/> 15	<hr/> 8

From the data, found in these cases, the writer deduces the following propositions :—

“ I. Digital compression, uncombined with apparatus, was first attended with success in the hands of Dr. Knight ; but to M. Vanzetta is due the merit of having first introduced it into practice.

“ II. It has never been followed by bad consequences, and when not successful, it so modifies the tumor and the collateral circulation as to render a cure by other means almost certain.

“ III. It has been employed alone, either previous or subsequent to mechanical compression, in fourteen instances, eight being failures.

“ IV. In only seven cases has it been employed primarily and alone, and in all but two with perfect success.

“ V. When double and alternating, it has effected cures in every case, five in number, and therefore deserves special attention.

“VI. In most of the cases the compression has been total ; but this is not necessary for a favorable result.

“VII. It has effected cures, whether it was continued, interrupted, or intermittent ; in some cases the patient applying the pressure.

“VIII. When properly employed and continued for a sufficient length of time, and the cases are suitable ones, it can scarcely fail to accomplish a cure. Inguinal aneurisms are not fit cases for this procedure.

“IX. It is less apt to give rise to inflammation of the integument, and has been borne when mechanical pressure has produced an eschar.

“X. It can be used when apparatus has failed or is intolerable. In a majority of these cases, cures have been accomplished.

“XI. In certain situations it can be made to bear upon the artery alone. It is far less painful and requires a much shorter time for a cure than any other method of treatment.”

Mammary Jacket. The December number of the Atlanta Journal contains an article from the Nashville Medical Record, descriptive of an ingenious appliance, under this name, for the treatment of mammary abscess. It is a paper read before the Montgomery, Tennessee, Medical Society, in 1851, by Dr. D. C. Higbee. It is badly printed, but we think the following extract too valuable to be lost:—

“Take a strip of strong cotton, woollen, or other goods, from ten to fourteen inches wide, and sufficiently long to allow the ends to overlap each other by several inches after encircling the chest. To this are sewed two broad and short shoulder-straps, having places scalloped out of the broad piece so that undue pressure will not be made in the axillæ. Neither splints nor starch need be used to keep the jacket from rolling upward; the configuration of the chest will always keep it smooth : just the reverse will be obtained in the abdominal bandage, in parturition. This jacket is to be put on like a vest, (but next the skin,) except when the shoulder straps are secured in front by a strong pin, which is generally preferable, that we may change the position of the mammæ with ease, or that the patient may be saved the trouble of undressing when a clean one is desired.

“Now suppose the abscess already well opened. If you wish to apply a poultice, let it be smoothly spread, circular, and *thicker at the base of the gland*, or otherwise, as the peculiar shape of the breast may require. When it is made thickest at its edge the pressure on the gland will be most equalized, for the circumscribed force, acting

laterally on its base, will prevent its becoming more flattened than natural, which I consider necessary to avoid when the gland is involved. Let us never lose sight of the anatomy of this organ.

“When I am not using the poultice, I surround the breast with wool or cotton to meet the same indication. But what I should greatly prefer in many cases would be a thin caoutchouc bottle of globular shape, or a very large bladder, so that when partially filled with some liquid, or air, it might be semi-collapsed, and laid over the mammæ, and bandage over it, which would insure a uniform pressure on all parts. If there be but one breast diseased, cut a sharp oval hole lengthwise with the bandage, or jacket, through which the healthy breast may protrude, having the aperture just large enough, so that there will not be undue pressure on the gland; thus the patient may give suck without inconvenience.

“Now let the lower edges of the jacket be drawn firmly around the body and secured by pound pins. Then place your hand under the mammæ and poultice, and elevate them rather above the point they would occupy if the patient were in a recumbent posture. If the cavity be very great, it may be necessary to draw the breast laterally, to place the sinus or lips in a position favorable for granulation, or for the complete escape of purulent matter, or for both. Continue the pinning of the jacket from *below upward*, until its ends are well secured.

“My rule for tightening this jacket is this: let it be as tight as the patient can comfortably bear it. If the inflammation be very acute, and the tumefaction great, a slight pressure only may be tolerated at first, but she will soon be able to bear it tighter, as congestion and inflammation subside.

“In nearly every case this jacket should be adjusted when the patient is recumbent, for the gravity of the ponderous breast will thus be conveniently overcome. This being done, cut an opening, if necessary, through which the nipple may protrude, having already secured one through the poultice, that the milk may be drawn with a breast-pipe or nipple-glass, by a nurse, or even the child, should the lacteal ducts not be diseased. The dressing should always be renewed frequently, and that, too, *when the patient is recumbent*.

“By this mode of treatment I have never failed in performing a cure, in an ordinary case, in from five to fourteen days, and the worst case I have seen required no more than three weeks.”

Hints to Craniographers.

We have had this circular, by J. Aitken Meigs, M.D., of Philadelphia, for some time on our table. It is designed to show the "importance of establishing some uniform system by which the collection and promulgation of Craniological statistics, and the exchange of duplicate crania may be promoted."

The object of Dr. Meigs is to collect data on the subject of Ethnology; and the plan he proposes is this: every individual, society, or college, having made collections of skulls, should, at once, let the fact be known, either through the medium of journals, or by publishing catalogues.

It is not long since every thing pertaining to the human organism was looked upon as unique; and, as a consequence, presided over by metaphysics. Barboneois, Ray, Brisson, have followed Aristotle in excluding man from their classifications of the animal kingdom. To Camper, Blumenbach, Zimmerman, Sæmmering, we are mostly indebted for the suggestion that the scope of zoology rightly includes man with other animals; and that by the application of science, instead of metaphysical speculation, much that relates to him morally and politically, may be successfully investigated.

As Comte has well remarked, every science has, as the first part of its career, a metaphysical or speculative stage. This has been eminently true with reference to the young science of Ethnology. The few truths which have been collected together, have been made the basis of no small amount of sophistical reasoning. Men have made their appearance who have been impatient with the research and delay necessary and incident to scientific pursuits; and they have brought reproach upon the inquiry. What is most needed at the present time, is the collection and classification of facts. A few zealous laborers, both in this country and Europe, have operated without the success that would have attended united efforts; still, enough has been elicited to induce the belief that careful and patient labor, in the right direction, will give a very valuable clue to race peculiarities that may be turned to practical account, morally and politically. It is a subject but little understood by either ourselves or our predecessors.

No part of the human organism is so distinctive of race, as the skull. In it are situated the brain, the senses—the organs that es-

tablish the relations between the individual and the things around him; the organs that determine and shape the characters of mankind.

We have, perhaps, at present, in the Academy of Natural Sciences, in Philadelphia, the largest collection of human crania in the world. This collection is due to the labor of the late Dr. S. G. Morton. It numbers now about 1,100 crania, representing 170 different tribes.

Dr. Meigs has given evidence of commendable zeal on the subject of Craniography, and we hope his "hints" may receive attention.

Books, Monographs, etc., received.

Lectures on Diseases of Women, By Charles West, M.D., 1858. (Blanchard & Lee.) Part II.

Paine's Institute of Medicine, 1858. New York. (Harper & Brothers.)

Morris on Scarlet Fever, 1858. Philadelphia. (Lindsay & Blackeston)

Contributions to Operative Surgery and Surgical Pathology, 1858. By J. M. Carnochan. New York. (Lindsay & Blakiston.)

An Examination of the Question of Anesthesia. (By the Hon. Truman Smith.)

An Essay on Inflammation, By J. H. Watters, M.D. St. Louis, 1858.

The Treatment of Paralysis of Motion. By Charles F. Taylor, A. M. M.D.

Introductory Lecture, By C. B. Lindsay. Nashville, Tenn.

Typhus Fever in Great Britain, By J. B. Upham, M.D.

Physicians' Visiting List, for 1859. This is a very valuable companion for the physician. Besides the usual contents, we have Marshall Hall's *Ready Method in Asphyxia*, Poisons and Antidotes, a table for calculating the period of Utero-Gestation, and an Almanac. (For sale by Randall & Aston.)

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PART FIRST.

ORIGINAL COMMUNICATIONS.

The Liver, and its Functions. By M. CRONINGER, Newville, Ohio.

The liver, the largest of the abdominal viscera, is situated in the right hypochondrium, extending across the epigastric, into the left hypochondriac region—being hid from view by the cartilages of the ribs and the ensiform cartilage of the sternum. It is retained in its position by folds reflected from its peritoneal envelop, to which anatomists have given the name of ligaments. A distinct system of blood vessels is appropriated to it; and from which mainly the secretion of bile takes place.

The arteries, which afford blood for its nutrition, arise from the coeliac axis of the aorta just as it emerges from behind the stomach.

The hepatic artery—intermediate in size between the splenic and gastric—the other members of the coeliac family—after giving a small branch to ramify over the upper curvature of the stomach, (*the arteria pylorica*)—and another to be distributed to the duodenum—(*the arteria gastro-duodenalis*)—inclines upwards and to the right side between the layers of the small omentum, and just before reaching the liver divides into two branches; one, the greater, going to the right lobe, and the other to the left, where they divide, and sub-divide throughout the entire organ.

The liver is supplied with nerves partly from the coeliac plexus, and partly from the pneumogastric and diaphragmatic nerves; these, uniting, follow the hepatic arteries into the substance of the organ, to their ultimate ramifications—surrounding and enveloping them in a web of nerve tissue—thus supplying the organ in every part with nerves. Chains of lymphatic vessels spread out all over the surface of the liver and dip into its substance, following the course of the blood vessels and nerves. It is also worthy of note, that these absorbents carry the products of their labors at once to the thoracic duct, although at different points along that important receptacle.

We have already remarked that the liver was furnished with a distinct system of blood vessels. This is one of the most remarkable circumstances connected with the animal economy—one, too, the natures and adaptation of which, at first, might not strike us as being very obvious. The portal system, by its distal venous radicals, gathers up all the blood which, after having circulated throughout the abdominal viscera to give life and pabulum to these important organs and tissues, comes back burdened with the debris afforded by these ever changing organs; together with much of the nutritious matter from the alimentary canal. This, then conveyed to the liver where, by another no less interesting capillary arrangement, it is distributed to every part of the organ, thus furnishing it with a circulation over which the ever varying state of the general system can have but little control—being, in some respects, isolated from a grand system, to the maintenance of which, it contributes so freely of its toil and care.

The function of the liver has been a theme of interest to the student of natural phenomena, long before anatomy was studied as a distinct science. The secretion of a peculiar fluid was regarded as being due to it, and the development of certain peculiar manifestations in diseased states of the system, was watched with interest as being the result of changes going on within the then mysterious organ. Nor is it to be wondered at, when we remember the difficulties which attended physiological inquiries before the arts had given to philosophical investigation its most modern and useful helps—Microscopy and Chemistry. Indeed, it was not uncommon to have erroneous offices attributed to any of the more important organs of the body.

Hence, while chasing the phantom of the human soul through the multifarious fastnesses of the body, it was not strange, that having

arrested the intellectual part of it in the convolutions of the brain, the part of the organ which has the power "to give to airy nothing a local habitation and a name," that they made the liver the palace royal of the soul. Hence, in ancient literature, the frequency of such terms as "Melancholy"—"Hypochondriasis"—"Bilious Temperament." Of one fact, however, the ancient fathers seem to have had very just conceptions: That whatever other purpose this organ might subserve in the animal economy, it did *secrete*, or eliminate from the fluids furnished it, a concrete matter which they denominated "cholos," or "bilos," the composition of which they did not attempt to understand. But when the lights of modern science began to dawn, the mists in which this subject had long been enveloped, rapidly disappeared before its genial warmth and glowing rays; and then stubborn facts usurped the place of hypothesis and assumption. The microscope traced out each delicate tissue, and demonstrated the beautiful ultimate texture of the liver cells, blood vessels and bile ducts, as they ramified over the lobules; and showed that, from the central parts of the lobules the fine capillary system of hepatic veins emerge. Chemistry, at first extremely chimerical, because occupied in the pursuit of the "Philosopher's Stone," or the "Elixir of immortal Youth," when brought to bear upon this subject, dissipated much of the uncertainty and ignorance which enshrouded it. The bile was analyzed and its constituents approximately ascertained; the changes which take place in the blood, or other fluids contributing to its formation, was noted, and the effects produced upon the blood by the secretion or elimination of the bile, was also pointed out.

Secretion, as defined by Mr. Webster, means "a separation of animal juices;" but, as used by physicians, means not merely a separation from the blood of the peculiar elements necessary to the formation of complex compounds, but also the gathering together of elementary matter and the compounding of this by cell action. This process may concern matter designed to be retained in the system; or it may be exerted upon the debris, the effete worn-out particles of organs no longer capable of being appropriated to the biological necessities of the organism, and in this latter case is called an excretion.

But not wishing to enter into a discussion of this subject, we will return and inquire from which of the delicate textures of the liver does this secretion of bile take place?

Here, too, the revelations of the microscope and the laboratory of

the chemist, have failed to satisfy the thirst of the anxious inquirer after truth. Some laborious investigators are led to the conclusion that the bile is the product of the secretory action of the epithelial membrane of the gall ducts, while too, the liver cells have the important duty of "forming" liver sugar and fat. While on the other hand, men of no less extensive and patient inquiry, hold that the bile is the undoubted product of the action of the liver cells, and that the epithelium of the liver ducts secrete a fluid, as in other epithelial tissues, which is appropriated to its own defense. From the very patient and extensive inquiries instituted and carried on by modern physiologists upon this subject, although nothing definite has yet been accomplished, we are led to believe that other important functions are performed by this organ, viz: the rejuvenescence or formation of blood corpuscles, or the production of other principles necessary to carry on the great vital processes of the system.

The bile secreted by the human liver, is of a bright yellow green color; or, when immediately secreted, it is said by some to be almost transparent; but it rapidly changes to a darker hue on being long retained in the gall cyst, or on being exposed to the atmosphere. It is of a ropy, tenacious consistence, containing a large proportion of water, and rapidly passes into decomposition. Its analysis by Berzelius, gave the following results:

Water	90.44
Biliary matter	8.00
Mucus of gall bladder.....	.30
Soda.....	.41
Chloride of sodium74
Phosphates and sulphates of soda and lime11
	<hr/>
	100.00

The biliary matter which is thus seen to form so inconsiderable a part of the above result, has itself been submitted to a great number of analytical experiments; but, I am sorry to say, with very contradictory results; hence, we are led to believe that until some new developments occur which will enable the practical chemist to make a more thorough analysis of this complex substance, we must despair of succeeding to correct views on the pathology of the liver.

There seems, however, to be contained in it, in varying proportions, glyko-cholic and tauro-cholic acids, generally in combinations with an alkali, forming salts. And what would strike us as very

remarkable, is, that in the bile of fishes inhabiting fresh water, as our northern lakes and inland seas, we have soda salts, while those of marine or salt water origin, furnish potash salts.

Cholesterine is found also in bile as an invariable constituent, forming the basis of its fatty acids and biliary calculi; there is also the pigments, two or three kinds of which are described as being sometimes found in the bile, under certain circumstances.

The quantity of Bile secreted in twenty-four hours.—Although most of the physiologists of the present day, depend for their estimate of the daily elimination of bile upon the experiments of Bidder and Schmidt, made at the Derpt laboratory, yet it seems very strange that such a great difference should exist between different authors. Thus, Bidder and Schmidt themselves, estimate the daily product of an ordinary sized man, at 54 ounces, which Dr. Draper thinks decidedly too high—from what reason, we are not informed. Dr. Chambers of England, from the same experiments, estimates the quantity at from three to four pounds; while Carpenter, without giving any thing new upon which to pin an argument, but as it would seem, from the same stand point, reduces the quantity to from seven to ten ounces. These experiments having been made on the lower animals, leave room for doubt, and should hence be looked upon as merely approximations.

The production of bile at different hours after taking food, has been observed to vary remarkably. Thus the increase is gradual up to the twelfth or fourteenth hour; it then gradually decreases for the next twelve hours, to its usual discharge. It thus appears to be in direct ratio to the demands of the system, as we shall soon see.

In its healthy and pure state, it is found to be most usually alkaline, but its chemical states, while in the system, do not seem to be much disturbed by the presence of acids in the intestinal tract. The secretion is very much under the influence of diet, medicine, disease, mental emotions, and other circumstances.

Thus a full meal increases it in quantity, as well as in its solid constituents. A diet of animal food passes rapidly into decomposition, and consequently demands the presence of an antiseptic, and thus encourages a very large flow of bile. In the use of fatty diet, less bile is secreted, which we would not have inferred from *apriori* reasoning; but it will not seem strange when we remember that fats do not undergo putrescent decomposition so rapidly as other animal tissues. Also vegetable diet causes less formation of bile.

Medicines have directly opposite effects on the secretion of bile, as was long since inferred. And history can scarcely point to the period of time that did not produce its "anti-bilious pills," and "liver purifiers." But late experiments give us room to hope that the shelves of the druggist may yet be unburthened of their useless loads, and the Doctor's pill-bags and his patients' stomachs may yet be treated to more savory condiments than extracts of taraxacum and blue pills. Large draughts of water will increase the flow of bile, but its solid matters are not increased in proportion to its fluids. While calomel increases the fluids, it absolutely decreases the solid matter. The experiments of Dr. Handfield Jones, however, led him to believe that mercurials caused an increased deposit of yellow coloring matter in the hepatic cells. But it should be remembered that this gentleman did not look upon the liver cells as the source of the bile, and hence his experiments would be opposed to his theory. Carbonate of soda decreases the secretion of bile, and, as I think, by its taking the place of the bile in acting as an antiseptic, in producing an alkalinity of the chyle. Acute diseases, as fevers and inflammations, interrupt the secretion of bile.

The mode in which medicines act in promoting the secretion of bile, is really not very well understood; and the more recent experiments on the liver have not removed from this difficult subject, much of its embarrassments. For while they throw doubt on our former views, they propose nothing in the place of them more certain. It was generally believed that mercurials acted DIRECTLY upon the liver—stimulating this organ into increased functional activity; and I believe this is still the prevalent opinion. In fact, so powerful has been the force of popular, as well as professional opinion on this subject, that to think otherwise was once regarded as heresy.

Fortunately the new lights we are receiving upon this and many other kindred subjects, if they do not lucidly expose former errors and clear up the future, they leave the mind less trameled and more free to look after nature's hidden mysteries; and we have reason to hope that some thing yet, in the undeveloped future, is awaiting the lucky adventurer. Taking the mercurials as a type of those medicinal substances supposed to act directly upon the liver, we will inquire for a moment into the literature of the subject; and as we do not propose going into a full discussion, we will commence with a consideration of the present position of the profession.

Dr. Wood, on this subject quotes the experiments of Dr. Samuel Wright, illustrating the effects of mercurials on the blood. These

go to show a deterioration and diminution of the solid constituents, including the albumen, fibrin and red corpuscles of the blood, "that it abounds in fetid, fatty matter ; and that it is more than ordinarily prone to decomposition." The Doctor refers this degeneration of the blood to the disturbed vital properties of the red corpuscles and fibrin, thus lowering "their grade of vital energy," and thus "disposing them to fatty degenerations." He also thinks that the yellow color of the alvine evacuations is an evidence of increased secretion of bile, and also of the breaking down of the red corpuscles of the blood. He accounts for the slight peristaltic actions of the bowels, and mild griping pains and uneasiness of the bowels after the mildest mercurial course, by the presence of bile in the intestinal canal.

Now it seems to me that this is putting the effect for the cause. Thus, we know that the effect of mercurials is to excite the salivary glands to an increased action if given in small doses. And, from analogy, it seems reasonable to believe that the small glands, in the intestinal canal, are in all respects both in construction and function, salivary glands, and affected by the action of medicines just as those situated further up the canal ; this being admitted, what would follow ? Why, that mercurials have no direct action on the liver at all. But then how will we account for the increased secretion of bile following the administration of mercurials ? In this way we have already seen that water increases the secretion of bile. Now I think it but just to infer that the mercurial increases the salivary secretion of the intestinal canal, thus affording a larger amount of fluids to be taken up by the venous radicals of the portal system ; just as when water is taken directly into the stomach ; and acts on the secretion of the liver. This view of the *modus operandi* of sialagogues is much more consonant with reason, than to suppose that half a grain of calomel, after being mixed with two or more gallons of chyle, and other matters in the intestinal canal — (supposed to be from forty-five to fifty feet in length) should be gathered together and thrown upon the liver, thus producing a stimulating effect. But how will we account for the effects so gravely spoken of as being produced upon the blood constituents by mercurial medicines ? Here it seems necessary, in order to answer this inquiry, to go a step further and inquire into the uses of the bile in the animal economy. We look upon the bile as first, acting as an antiseptic to the chyle. It has already been stated that the chyle rapidly

undergoes decomposition when no bile is present ; and we would also infer from the beautiful provision of nature by which the secretion of bile increases as digestion advances, and then, as gradually decreases, that it was present for some such purpose. It must, also, in this connection, be remembered, that the bile renders the fats of ingesta capable of being absorbed by the venous radicals. And it is of no less importance to remember that through this great emunctory, much of the debris and other worn out substances such as broken down and disintegrated blood and lymph corpuscles, are got out of the system.

With such facts before us, suppose that a course of mercury is decided upon, the following phenomena will be observed : the medicine will increase the secretion of saliva in all the salivary glands, and an increased quantity of water will be taken into the portal vessels, the result of which will be, an increase of fluid bile with a diminished proportion of solid constituents—in fact an unhealthy bile, unfit to preserve the chyle from decomposition—this, if taken up by the lacteals, together with the nutrient matters in the intestinal canal in a state of incipient decomposition, must give rise to a putrescent condition of the blood.

But the yellow colored, or the dark tarry discharges, have not yet been accounted for.

In regard to this question we have no hesitancy in saying that these variously colored fecal discharges are due to the disintegrated blood corpuscles and other debris from the tissues in general—and that they are thrown out by the liver, as before intimated.

In view of the fact that crude theories upon this subject have been sanctioned by old and time honored names, I offer these suggestions with that humility becoming a true student of nature, and a lover of truth.

Rupture of the Femoral Artery; occurring in a patient at the Ohio Penitentiary. Reported by B. F. CULVER, student of medicine in Starling College.

E. Moffit, aged 53, of nervo-bilious temperament and slender frame, while sawing lumber with a buzz saw, October 21st, 1858, was struck in the left groin with a piece of inch plank about four feet long, and was at once conscious of some unusual injury.

The prison physician being summoned, discovered that a large blood vessel had been ruptured, and estimated that about one

and a half gallons of blood had been effused into the surrounding tissue, increasing the thigh to nearly double its former size. Moreover a large conical elevation appeared over the seat of injury, being distended with blood, and having on its summit a slightly abraded spot about an inch in diameter.

The case being unusual, the physician was thrown entirely on his own judgment respecting its nature and treatment.

He immediately ordered the patient to be put to bed, and cloths wet with cold water, to be applied to the part to prevent the development of inflammation, enjoining at the same time perfect quiet.

During the day the entire left side of the patient, from the fourth rib to near the knee, assumed a dark purple color. Still he was quite comfortable and free from pain, when quiet. This was the treatment until the fifth day, his bowels being kept loose by a laxative.

On the fifth day he disobeyed the injunction of the physician, and rose to perform the act of defecation. A fresh bleeding was the result, and though slight in amount was sufficient to alarm him and prevent any future disobedience. The bleeding, however, subsided in a short time.

During this time the abraded point showed a strong tendency to suppurate, and all possible care was taken to prevent an occurrence which it was supposed would have made an outlet for the escape of the blood and thus prove fatal.

During all the time the patient was free from pain, and a gradual absorption of the effused blood seemed to be going on, and from a seemingly hopeless case it became more promising. The disturbance of sensation which occurred at first, gradually subsided to something like its normal condition.

A most marked feature in the case was the entire absence of pulsation in any part of the affected limb; another was the enlarged and turgid condition of the veins of the leg, and a constant sweat, like exudation from the skin, though the temperature of the part was considerably lower than the rest of the body.

The diet was carefully guarded, both in respect to quantity and quality; care being taken not to give him any excess till the danger of inflammation was past—bowels were kept loose.

Under this treatment the patient gradually improved, and was discharged on the 29th of January, 1859, after an illness of 99 days.

On the one hundred and fifth day after the accident, he came

before the medical class of Starling College, being then able to walk by the help of a cane. At this time all traces of effusion had disappeared, and instead, a hard irregular tumor occupied the former seat of injury, seeming to occlude perfectly the vessels of the part. *There was not even then the slightest perceptible pulsation in any part of the limb.*

Shortly after this the patient left the city, and has not since been heard from.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

REGENERATION OF THE SPINAL CORD.—(*Lancet.*)—SIR: Numerous as are the recorded cases of nerves rapidly healing after division, and regenerating after a small excision of their substance, I am not acquainted with any case of regeneration of the spinal cord after complete division. The following may therefore be of interest:

In the course of numerous experiments on the batrachia, some of which consisted in dividing the spinal cord in various regions, to establish different independent centres of nerve-action, I found that a frog with the cord divided in the dorsal region, after exhibiting for some weeks the most complete independence in its anterior and posterior extremities, began at last to exhibit a certain *consensus*. Originally, when the posterior extremities were pinched or touched with acid, they were agitated, but the anterior remained motionless; and *vice versa*. Sometimes the anterior segment crawled, dragging the posterior segment after it like a log; at other times the posterior segment moved, and the anterior was quiet. No irritation of the one segment had any perceptible effect on the other segment; the two were as completely separated as if they had been two different animals.

About ten days ago, I was showing a friend this interesting example of two independent centres of nerve-action in one animal, when, to my surprise, instead of the anterior extremities remaining perfectly quiescent, when the posterior was pinched, a decided agitation was visible in them, though of a slight character. This was so contrary to all that I had observed in the case of other animals, that at first I set it down to the wrong cause; but on reflection, it occurred to me that there had perhaps been a partial regeneration of the spinal cord. The next day I tested this, and found unequivocal symptoms of sensibility. Whenever the posterior extremities were pinched, the anterior were also agitated. It was evident that the two centres had become one, as respects sensibility; but the

slight traces of a consensus of voluntary motions were too equivocal to admit of a decisive affirmation,

To-day, I find all doubt disappear. The consensus of voluntary motions is so far re-established that the frog (which, by the way, has only one hind foot) in crawling, uses the posterior extremities in aid of the anterior, awkwardly and inefficiently, it is true, yet in a manner unmistakably different from his former mode. It will even make one hop, when much irritated ! This shows that to some considerable extent, there has been a re-union of the sensory and motor centres, formerly separated. There are no longer two utterly independent centres ; whatever affects the one segment affects the other. A consensus has been re-established ; and this would probably have been more perfect had the animal been left in perfect repose from the period of the original section of its cord ; but having since then been subjected to a variety of experiments, a perfect healing of the two ends has perhaps been prevented.

I am, Sir, yours truly,

G. H. LEWES.

NERVOUS SYSTEM, REPORT ON.—Kussmaul and Tenner produced by compression and ligature of the arteries of the neck in healthy rabbits, the same epileptic convulsions which are seen in animals bleeding rapidly to death. In very debilitated or etherized animals neither loss of blood nor compression of the arteries caused the convulsions. The closure of both carotid and subclavian arteries was necessary in order to effect the convulsions ; if circulation was allowed to continue in any one of the four vessels, convulsions never ensued, but only weakness and paralysis. The general convulsions usually commenced about eight to eighteen seconds after the interruption of the arterial circulation. For the description of the convulsions we must refer to the essay itself. Epileptiform they are, according to the authors, because the animals before the commencement of the general convulsions fall down, deprived of voluntary motion, with the appearance of loss of consciousness, never screaming before or during the attack ; further, because the pupils are, during the attacks, dilated and motionless, and the eyeballs likewise fixed ; that the attacks begin with contraction of the cervical muscles, that the respiration is suspended, although the heart's action is uninterrupted ; and that the atonic convulsions of the limbs end in tonic convulsions, are additional causes for the authors views regarding the nature of the attacks. As soon as the interruption of the circulation ceases, the convulsions leave off. The sudden return of the blood to the head never causes convulsions. By means of holes made in the cranium, the authors observed that the stoppage of the circulation was followed by capillary anæmia and venous oligæmia of the brain and its membranes ; that the venous oligæmia became diminished simultaneously with the commence-

ment of the convulsions, but that the paleness of the brain continued. As the essential cause of the convulsions, the disturbed nutrition of the brain is considered. The diminished mechanical pressure is regarded as of only secondary importance. The attacks took place even when a great part of the cerebrum, cerebellum, and medulla oblongata was laid open. Anæmia of the spinal marrow caused only paralysis of the limbs, the muscles of the trunk and respiration never real convulsions; when the privation of blood was sudden and complete, slight trembling motions of the limbs preceded the paralysis. A series of experiments, made by taking off parts of the cerebrum, proved that the epileptiform convulsions did not depend on the cerebrum, but on the suddenly interrupted nutrition of the motor centres situated between the optic thalami. From these results, and the authors' experience on man, they infer that epileptic convulsions in man occur only when, besides the cerebrum, some of the parts, or all parts of the brain situated behind the optic thalami, become suddenly deprived of the sufficient amount of blood; that, however, the fall preceding the convulsions, the loss of consciousness and sensibility, depend on the affection of the cerebrum. Congestion of the brain, either active or passive, appears to them a very improbable cause of epileptiform convulsions. The sphagiasmus and trachelismus of M. Hall, the authors say, is not to be considered as a source of epileptic paroxysms, but the laryngismus is such a source. It seems further probable, from some experiments, that some forms of epilepsy are connected with a spasm of the contractile elements of the cerebral arteries. The medulla oblongata, therefore, as the origin of the contraction of the glottis and of the vaso-motor nerves, may be regarded as a frequent cause of epileptic paroxysms.

Stich observed that in cases of paralysis of the facial nerve, the corresponding margin of the tongue exhibits a diminution of taste, which phenomenon does, however, not extend to the root of the tongue. The diminution of taste does not take place if the cause of paralysis lies on the base of the cranium; but if the cause lies at the origin of the chorda tympani, or has a more peripheric situation, the disturbance of taste occurs. Schiff remarked this phenomenon in a man whose facial nerve had been cut through close to its emergence from the stylo-mastoid foramen. It appears, therefore, that this disturbance is attributable not to the facial nerves, but to the fibres derived from the fifth pair.

Spiegelberg concludes, from numerous experiments on rabbits, cats, and guinea-pigs, regarding the movements of the uterus. 1. That the stoppage of the circulation is the cause of the peristaltic movements of the uterus. The uterus resembles in this respect the intestinal tract. Compression of the aorta immediately below the diaphragm, causes always movements of the tubes of the uterus and intestinal tract, which continue as long as the compression lasts, and ceases as soon as the interruption of the circulation is suspended. 2. The pneumogastric nerves exercise no immediate influence on the uterus; but if they stop the action of the heart, this

circumstance acts like the compression of the aorta. 3. Irritation of the medulla oblongata excites contractions of the uterus, which phenomenon is not influenced by section of the pneumogastric nerves. 4. The cerebellum is the principal centre for the movements in question. Irritation of any part of it excited the action of the uterus, that of the posterior half of the corpora quadrigemina was likewise often successful, that of the cerebrum never. 5. The movements may be excited from every portion of the spinal marrow, but especially from the lumbar and sacral portion. The movement of the pregnant uterus may be stopped by means of irritation of the spinal marrow; this, however, the author attributes to over-excitation. 6. The sympathetic and sacral nerves form the means of communication between the nervous centres and the uterus. 7. The impulse to the parturient action of the uterus is not given by the nervous system, but probably by local changes of the circulation in the uterus, occurring at the termination of pregnancy.

The same author confirms the dependence of the intestinal movements on the spinal marrow and brain. From all places which excite the movement of the uterus, that of the intestines may be likewise excited. Interruption of the circulation effects likewise very active movement of the intestinal canal; compression of the aorta does it to a much greater degree than compression of the vena cava or vena portæ. This would be opposed to Brown-Séquard's view, that the carbonic acid in the blood is the cause of the peristaltic movements. It would also appear incorrect to ascribe the peristaltic motion of the intestines exposed to the air immediately after the death of the animal merely to the excitation by the air.

Pflüger's assertion, that irritation of the splanchnic nerves stops the peristaltic movement of the intestinal canal, has been repeatedly contradicted. Kupffer and Ludwig found that irritation of the nerves in question may excite the action of the intestine, or stop it, according to the condition of the latter. We may add to this, that there are now various observations extant that the same nerve may cause movement and may arrest movement. Schiff's view, that the arresting of movement is not a peculiar action of the nerve, but the product of over-irritation—i. e., exhaustion, appears to deserve the attention of experimenters. We need only mention that Erkhart observed acceleration of the heart's contractions by *moderate* irritation of the pneumogastric nerve.

Budge found, in his experiments on various animals, contrary to the view expressed by Romberg,* that the ganglion semilunare and the ganglion mesaraicum are in a considerable degree sensitive; at all events as sensitive as the pneumogastric nerve, the splanchnic nerve, the ramus communicans, and the cervical ganglion of the great sympathetic; but much less so than the fifth pair or the posterior roots of the spinal nerves.

Czermak confirms Ludwig's observations, that irritation of the sympathetic branch of the submaxillary gland, or of the cervical

*Lehrbuch der Nervenkrankheiten, third edition, vol. 1, p. 151.

portion of the sympathetic nerve, may excite the secretion of saliva just as much as irritation of the glandular branch of the lingualis. The author remarks, however, in addition, that electrical irritation of the cervical part of the sympathetic nerve, may diminish, and even suspend the secretion of saliva. Sometimes the irritation of the glandular branch of the lingualis does not influence the secretion of saliva, when the sympathetic nerve had been previously irritated. If both nerves are stimulated simultaneously, the secretion rapidly reaches its maximum, but after fifteen or twenty minutes, it becomes diminished, and frequently ceases altogether. We have therefore another proof of the arresting action of the nervous system, if we do not prefer to explain the phenomenon just described as the product of over-irritation.

The experiments of Harless, made on the nerves of frogs, prove that the sheaths of the nerves are of great importance in regulating the irritability of the nerves. The author considers himself entitled to infer that the irritability and the conducting power of the nerve are in close connexion with the proportion of water contained in the nerve—viz: that they become much increased by any loss of water sustained by the nerve. He further maintains, that the degree of irritability and conducting power varies with the degree of pressure exercised by the sheath; that this pressure becomes increased by the process of exudation of the sheath; that, therefore, the irritability and conducting power of the nerve depend, to a great degree, on the percentage of water contained in the sheath.—*Brit. and For. Med.-Chirur. Review.*

A New Function of the Placenta. By CLAUDE BERNARD.

[Translated from the French by WM. F. HOLCOMB.]

The object of my communication is to establish anatomically and physiologically that, among its uses, which are without doubt diverse and multiplied, the placenta is designed during the first stages of foetal development to perform the "glucogenic" function of the liver before it has acquired the development and the structure in the foetus which permit it later to perform its functions. I have for a long time been diverted from the point to which all my researches tended, because I made my experiments upon the placentas of ruminants, which are most easily procured in the slaughter-houses of Paris. For several years I have made multiplied, but fruitless, observations upon calves and sheep taken at all stages of intra-uterine life, and it was impossible for me ever to find any part of the placenta of these animals which contained glucogenic matter. In spite of these complete failures, I had recourse afterwards to the placentas of rabbits, Guinea pigs, &c. I found that there was in the placentas of these animals a whitish substance formed of epithelial or glandular cells agglomerated. I proved that these cells, like those in the liver of

the adult animal, were filled with glucogen. This mass of glucogenic cells seemed to me to be situated principally between the maternal and the foetal portions of the placenta, and after being developed they appeared to become atrophied in proportion as the foetus approached. The time of birth I recognized in this manner: that the placenta of the rabbit and Guinea pig is formed of two parts, having distinct functions: the one portion vascular, and permanent until birth; the other glandular, preparing the glucogenic matter, and having a duration less extended. Notwithstanding there remained the negative observations made in such great numbers upon ruminants, which were for me as unquestionable as those in which I had obtained positive results. In resuming these investigations, I have arrived at the proof of a remarkable disposition which could not certainly have been foreseen: that is, that in the ruminants, whilst the vascular portion of the placenta, represented by numerous cotyledons, accompanies the allantois, and spreads itself upon its external surface, the glandular portion separates from it, and is developed upon the intestinal surface of the amnios. From which it results, that if in the rodentia and other animals with a simple placenta, the vascular and glandular portions of the placenta are mingled together; in the ruminants, on the contrary, these parts of that organ are developed separately, and on distinct membranes, and can, in consequence, be observed separately in their respective evolutions. Thanks to this anatomical disposition, we can prove clearly that the vascular portion of the placenta is persistent and increases until the moment of birth, whilst we see the glucogenic portion attached to the amnios growing during the first period of gestation, and attaining at the third* or fourth month its maximum of development, then disappearing little by little, in passing under the various forms of atrophy and degeneration, in such a manner, that at the birth of the mammiferæ there will not exist a trace of the hepatic portion of the placenta. It must be added, in characterizing distinctly these organs, that during all the time of the growth and action of the hepatic placenta of the amnios, the *liver* of the *foetus* possesses neither structure nor function, and that it is precisely at the moment when the liver is developed, and that the cells having acquired their definite form, commence to secrete the glucogenic matter, that the hepatic organ of the amnios begins to disappear. The hepatic "plaques" of the amnios in the *ruminants* appear in the first stages of embryonic life. They are developed gradually on the internal surface of the amnios, covering at first the umbilical cord, just to the point where a distinct line separates the skin from the amnios. Then these coverings, which, upon the portion of the membrane which clothes the cord, assume more particularly the form of villosities, extend themselves upon the other portions of the amnios in proportion as the sanguineous vessels which accompany them are developed. They increase little by little in volume, formed at first of a transparent matter; they become later more opaque, especially towards their edges, which

* I can give here only an approximate limit, by reason of the impossibility to know the exact age of the calves procured at the slaughter-houses.

turn up a little, and cause them to resemble in appearance a cover of lichen. They are, besides, in form sometimes flat, sometimes filiform, extremely varied, and sometimes so confounded with each other as to become confluent. When completely developed, these "plaques" sometimes attain a thickness of three or four millimetres; those which are filiform occasionally present a much greater length, and are now and then enlarged in the form of a club at their extremities. Later, these hepatic "plaques" cease to develop. In certain parts they become yellowish, and assume a fatty appearance; in other places they fall, and float in the liquor amnios. They leave at first a kind of cicatrix, which afterwards entirely disappears. It can be proved with the greatest facility, that the glucogenic matter is always present in the hepatic "plaques" of the amnios in every stage of their development. As soon as they appear it is easy to recognize this matter with the microscope, by the aid of iodine. When these "plaques" are perfectly developed this matter can be obtained in large quantities, and its character studied. To obtain it easily, the process consists in dipping the amnios membrane in boiling water, so as to permit the layers to be easily detached, then grind them in a mortar, and extract the matter by boiling exactly the same as for the glucogenic matter of the liver. As to its character, the glucogenic matter of the amniotic "plaques" offer the most perfect identity with that of the liver. It dissolves in water, precipitates by alcohol, and crystallizes by acetic acid. Iodine gives it an intense wine-red color, which disappears by heat, and reappears on cooling. This coloring, by iodine, of the glucogenic matter of the amniotic "plaques," takes place not only when it has been extracted from the cells by boiling, but also upon the cells themselves, as we shall soon see.

Like the glucogenic matter of the liver, the matter from the amniotic "plaques" changes into dextrine and glucose with the greatest facility, under the influence of ferments, both animal and vegetable, and by boiling with strong acids. When the anatomical structure and development of the hepatic "plaques" of the fœtus are studied, the formation of the glucogenic cells can be distinctly followed, as well as the development of the matter in their interior. The amnios membrane in the calf seems to be at first deprived of well-characterized epithelium, and the tissue is found to be constituted especially of elastic fibres, with nuclei contained in a network of cells; in appearance fusiform. At the moment even of the appearance of the "plaques" there can be seen by the microscope upon the internal surface of the amnios, and at first upon that part of this membrane which covers the umbilical cord, a species of *spot* formed by epithelial cells; then in the centre of that spot can be seen groups of glandular cells, at first in very small numbers; and it even happens that at the very first appearance of this "plaque" it seems to be formed of only one or two glandular cells. The glandular or glucogenic cells are distinguished from the epithelial cells which accompany them, first by their form, and afterwards by their reaction with iodine. In fact, if a little of the acidulated tincture of iodine

be added to a papillæ, or to the amniotic "plaques," and placed under a microscope, the cells will very soon be seen to take a wine-red color, while the epithelial cells will remain colorless, or become slightly yellow. Little by little, the groups of glucogenic cells increase by their development, and take the form of papillæ, particularly upon that part of the membrane which covers the cord. Examined under the microscope, these papillæ are found to be constituted of glucogenic cells, covered by epithelium. When the acidulated tincture of iodine is added, these glucogenic cells of the papillæ become of a wine-red color, especially at their base, which is distinctly separated from the tissue which surrounds it. The hepatic "plaques" are composed of the same elements as the papillæ. It is very difficult to know if, in their agglomeration, they should be considered as a union of papillæ, or as having another mode of growth. All that can be said is, that they are seen to extend themselves by their circumference, which offers well developed glucogenic cells; while in the centre, these cells seem sometimes to be at a stage of development less advanced. When the cells are broken and the anatomical elements mechanically separated, the isolated cells are obtained sometimes with a nucleus and sometimes with a nucleolus, and containing a granulous substance. This substance takes a wine-red color with the tincture of acidulated iodine. The core or nucleus, the volume of which seems susceptible of variation under re-agents, does not always take the same color with the iodine. The cells of the hepatic "plaques" of the amnios offer, moreover, a great analogy of form and of reaction with those of the liver in a state of action.

The cells of the amniotic covering and those of the liver may be separated by macerating for a time a portion of the tissue of these organs in a concentrated alcoholic solution of caustic potash. Then the contents of the two orders of cells remain insoluble, and fall to the bottom of the liquor in the form of a whitish matter, which presents, under the microscope, either the primitive form of the cells, or amorphous granulations. If, then, the excess of potash is saturated by crystallizable acetic acid, and the tincture of iodine be immediately added, the wine-red color appears with even more intensity than in the fresh cells.

When the hepatic coverings commence to grow yellow, to fall, or to be absorbed, or to degenerate into fatty matter, changes can be perceived in their microscopic structure. The glandular cells lose in general, at first in the nucleus or core, and at the same time the glucogenic matter; so that in heating, under the microscope, one of these altered coatings with the acidulated tincture of iodine, a mingling of cells is seen, of which some are of a wine-red color, while the others remain colorless. It is proved, besides, that the cells remain colorless, are deprived of their nucleus and of their granulous contents. At the same time there is a perceivable difference between these two extreme conditions; there are some of the cells from which the nucleus and the granulous matter have almost disappeared, and in which the wine-red color is hardly perceptible.

A little later, when the "plaques" of the amnios are formed of cicatrices, only the flattened cells are found, but entirely deprived of their nucleus, and in which it is impossible to find the least trace of glucogenic matter. Later, these cells disappear entirely. When the "plaques," instead of falling or disappearing, degenerate into fatty matter, the microscope proves their presence; at the same time mingled with this fat are seen beautiful octohedral crystals, which present the same characteristics as the crystals of *oxalate of lime*, inasmuch as they are insoluble in water, or in *acetic acid*. It is unnecessary to add, that there is a complete absence of glucogenic matter in the degenerated hepatic "plaques." If now we examine, together, the evolution of the hepatic "plaques" of the amnios and the organization and development of the texture of the liver of the foetus, we shall be struck with the connection, constant and *inverse*, which is observed between the development of the cells of the liver and that of the hepatic "plaques."

During the first stages of embryonic life* while the amniotic "plaques" are well filled with glucogenic matter, it is proved that if the liver of the foetus, then very soft, and composed only of embryonic cells, rounded or fusiform, be dissolved in the alcoholic solution of potash, it is not colored by the iodine, nor has it any of the characteristics of the glucogenic cells. At that epoch the tissue of the liver shows not the least trace of glucogenic matter.

At the end of their period of growth, when the glucogenic cells of the amniotic "plaques" commence to disappear or degenerate, it is found that in the liver of the foetus, the cells having acquired the definitive form of the cells of the liver, inclose one or more nuclei with their granulous contents, which are not soluble in the alcoholic solution of potash, and they take the *wine-red* color of the iodine after the alkali has been saturated with acetic acid. It is at this epoch that the glucogenic matter can be extracted from the liver of the foetus, which has become more firm, exactly like that found in the liver of the adults.

Later still, when the "plaques" have completely disappeared, or have entirely degenerated into fatty matter, and the foetus is near the period of birth, it is found that the tissue of the liver, which has become as firm as in the adult, is composed of the anatomical elements which have taken their definitive form. All the cells of the liver are then filled with glucogenic matter, which can be extracted in as great abundance as from the best-fed adult animal.

From the summary of all the facts contained in these experiments the following conclusions may be drawn :

First. There exists in the placenta of the mammiferæ† a func-

*In the commencement of foetal life in the embryo of the calf, that is, at three or four centimetres length, I have not been able to perceive the "plaques" of the amnios. Perhaps, then, the glucogenic cells may be found in the umbilical vesicle.

†In birds (the hen) I have proved the existence of the glucogenic cells which develop themselves in the walls of the gizzard before the development of these cells in the liver; but not having been able to follow completely their evolutions, I will treat that subject in another communication, confining myself at this time to the mammiferæ.

tion which until now has been unknown, and which seems to supply the glucogenic function of the liver during the first period of embryonic life. This function is located in an anatomical element, glandular or epithelial, of the placenta, which in certain animals is found mingled with the vascular portion of that organ, and which in the ruminantia presents itself separately, forming upon the amnios, plaques in appearance epithelial, which without doubt everybody has been able to see, but of the use of which, until now, they have been ignorant.

Secondly. This temporary hepatic organ of the placenta, in permitting the direct study, in an isolated anatomical element, of the production of glucogenic matter, confirms and proves by a new example what I have before declared, that is, that the formation of the starchy glucogenic matter takes place both in the animal and vegetable kingdoms. The observations in this paper furnish us with still more striking analogies; since we see the starchy glucogenic matter accumulate around the embryo animal, just as in plants we see it accumulate in grains around the embryo plant.

Thirdly. The glucogenic function commences at the commencement of foetal life, and before the organ which is the seat of that function in the adult is developed. But it is located in a temporary organ belonging to the appendices of the foetus.

Fourthly. All that has been said in this paper relates only to the glucogenic function of the liver. But now the question would be, whether the biliary function which the liver possesses in the adult is equally accomplished by the hepatic organ of the placenta, as we have described. The question should be stated in these terms: to know if the glandular cells are charged with two functions, which for the time are connected, and answer one for the other; or if, on the contrary, the liver should not be considered rather as a complex organ, in which are found mingled distinct anatomical elements, the one destined to the formation of starch, and the other for the formation of bile. This question, which up to the present time anatomists have not been able to solve, in spite of the numerous works of which the liver has been the subject, seems to me to be susceptible of enlightenment, and even of decision by physiological researches, made on the one hand upon the embryonic development of the function, and on the other upon the inferior animals. I have undertaken experiments on this subject, of which I will render an account to the Academy as soon as they are completed.

The Medical Practitioners of Ancient Rome. By E. R. PEASLEE, A.M., M.D.

The adage, "*nusquam medicina non est*," implies that there never has been a nation or tribe in which the practice of medicine has not, in some form, at all times obtained. But, on the other hand, much stress has been put upon the assertion of Pliny the elder, who wrote

A. D. 78, that during the first six hundred years after its foundation, or up to B. C. 153, Rome had no physicians.

Pliny's assertion, however, if correct, does not disprove the adage so far even as Rome was concerned; for there has always and everywhere been much medical practice, independent of physicians; and we have no reason to doubt that the sick were treated and taken care of at Rome, from its very foundation, by those best qualified for this office. In regard, however, to the advent of physicians, properly so called, to Rome, Pliny must have been mistaken.

Two circumstances are calculated to invalidate Pliny's statements on this subject:

1. Pliny was not a medical man, but a laborious compiler of various departments of knowledge; his "Natural History," consisting of thirty-seven books, treating of cosmography, astronomy, geography, physics, agriculture, commerce, the useful and fine arts, the moral constitution of man, the history of nations, natural history proper, and medicine. He is said to have condensed his materials from more than two thousand authors, and from the reading of his whole life.* But he, like many others of his countrymen, cherished a strong prejudice against the medical profession, and hence his testimony must be accepted with some degree of allowance.

2. The authority of Cato the Censor, who wrote about B. C. 170, or about two hundred and fifty years before Pliny, is mainly relied upon by the latter, in his statements respecting the medical profession in Rome. Cato, however, wrote not long after the time when physicians first came to Rome from Greece, or about the year of the city 583; and he manifested a violent hatred against the whole medical profession. Medicine had been first practiced at Rome under the patriarchal form; the oldest and best instructed of the relatives treating the diseases of his family as he understood them. Old Cato himself had been much interested in his domestic medicine, and had even written a book on the subject, in which he recommended cabbage as a sovereign remedy in many cases. He also venerated the number three, after the manner of the Pythagoreans; and transmitted to posterity an incantation for curing a dislocation or a fracture, which is too curious to be lost. "For curing a luxation of the hip," says he, "take a divining-rod, four or five feet long, split it in the middle, and let two men hold it at the hip and begin to sing: '*In alio, s f., motas vœta daries dardaries astataries dissunapiter,*' until the injured parts are united. The luxation being reduced, or the fracture set and properly adjusted in splints, repeat the incantation every day as at first, or the following: '*Huat hanat huat ista pista sista dominabo damnaustra;*' or, after this manner: '*Huat haut haut ista sis tar sis ardunnabon dunnaustra.*'"—WATSON: from Cato de Re Rustica, Cap. clx.

It is very natural that a person in this state of mind should conceive a violent antipathy for any attempt at scientific practice, and especially if made by foreigners, professing superiority to the

* Dr. J. Watson: "The Practice of Medicine in Ancient Times," p. 139.

method then in vogue. There are narrow-minded and bigoted persons at the present day, also, among the educated, as they are self-styled, who denounce everything that is really scientific in medical practice, and laud some one of the various phases of quackery instead ; and who would speak of the present race of physicians very much in the style in which Cato denounced the doctors of his time, in a letter to his son Marcus, and from which Pliny makes a quotation : "I will tell you," said he, "when I have an opportunity, what I think of these Greeks. It is good to study to some extent, their letters and sciences, but it is not necessary to learn them fully. Be assured, as if a prophet had told you, that, as soon as this nation shall have communicated to us its literature, it will spoil and corrupt everything ; and this will be so much more easily effected, if it sends us *also its physicians. They have sworn among themselves to kill all barbarians by their medicine*, and yet they require pay from those whom they treat, in order to gain their confidence, and thus ruin them more easily. They are insolent enough to call us barbarians, and even treat us more disdainfully by calling us *opiques*. In short, remember that I have forbidden you to employ physicians."

In the 5th chapter of the 29th book, Pliny expresses his own opinion of medicine, as follows : *Mutantur ars quotidie, toties interpolis et ingeniorum Græciæ flatu impellimur : palamque est, ut quisque inter istos loquendi polleat, imperatorem illico vitæ nostræ necisque fieri : ceu vero non millia gentium sine medicis degant.* "The art is changing daily, assuming a new dress as often as we are carried away by some new-fangled notion from Greece ; and when one of these fellows gains an ascendancy by his talking, he becomes on the spot an arbiter of life and death to us ; as if thousands of nations do not get along without doctors." It must be admitted, that this last sentence contains a somewhat random assertion ; and it is in the same passage that he says that the art was not practiced among the Romans until the six hundredth year from the building of the city, or B. C. 153.

But though the old censor's mind was too full of prejudice and suspicion to admit of his being a reliable witness as to the merits of the physicians of Rome, he leaves us no doubt of the fact that physicians were engaged in practice there before the time specified by Pliny. In fact, Pliny himself says (chap. 6 of book xxix.), that a surgeon came to Rome in the five hundred and thirty-fifth year after its foundation, and that he received a most cordial welcome at first ; but shortly, from his cruelty in cutting and burning, they called him a butcher, and his art a nuisance.

It is, however, very probable that both Cato and Pliny were not very much in the wrong in attributing to the foreign doctors in Rome a low degree of actual professional merit. It very seldom happens that the best physicians leave their native country, since such are always sure to be appreciated and required at home. And at this time, and long afterwards, as Galen informs us, those who flocked to Rome from Greece and elsewhere, were mostly fifth rate

* Cato De Re Rustica. Renouard's Hist. of Med., p. 249.

doctors, or miserable mountebanks. It is said that even Asclepiades himself, the friend of Cicero, and who settled in Rome B. C. 63, descended to some of the low methods of quackery; and long after him, Thessalus, when he appeared in public, was always accompanied by a troop of bakers' boys, butchers, weavers, carders, and others of the lowest classes, whom he called his pupils, and whose vulgar language he used. He was, however, patronized by the Emperor Nero, and acquired immense wealth.

Galen explains the fact, just stated, in the following passage, and it is now as applicable to New York as it was 1,700 years ago to Rome: "In a vast and populous city, like the capital of the Roman Empire, it is easy for a stranger, and even for a citizen, to conceal his name, his birth, his fortune, and his conduct. A man is only judged by the luxuries he displays and the arrogance he exhibits. If accidentally he is discovered, it will suffice him to change the location; while in a small town, all the inhabitants know each other; a man's relatives and education are so well understood that fraud is impossible."

And among the various forms of charlatanry in those days, the water doctors also flourished. The system of Thessalus was overthrown by Crinis, of Marseilles; and after the latter, says Pliny, (chapter 5th of book xxix.,) there came along one who entirely outshone all preceding hydropaths. "Condemning all former physicians, and the baths then in use, he persuaded his patients to use cold water during the rigors of winter. He plunged sick people in ponds. We have seen aged consular gentlemen freezing themselves from sheer ostentation. We have also Annæus Seneca's* personal statement in proof of this. Nor is there any doubt that these fellows, seeking fame by any form of novelty, would in a moment sacrifice our lives for lucre."

There is no reasonable doubt, therefore, that Rome had her physicians at least more than half a century previously to the time specified by Pliny. But in order to settle this question independently of history, I some time ago consulted the Latin poets, expecting that, since dramatic poetry finds most of its inspiration in the pleasures and pains of daily life, I should find in the Latin comedies some allusion to the early physicians of Rome. And not to adduce other authors and other allusions, I find that in two of Plautus' comedies—*Amphytrion* and *Epidicus*—the doctors' shops are spoken of in connection with the barbers' shops; "*medicinis*" and "*tonstrinis*" being the terms used. In another of his pieces, entitled "*Aulularia*," I find a line demonstrating the fact that about the year of Rome 560, there were persons called doctors, who prescribed for a fee. It is this:

"*Numo sum conductus, plus jam medico mercede est.*"

A learned commentator, (M. J. Naudet,) shows that "*numus*" means a "*didrachma*," (two drachmas,) or about 32 cents. "*Numo sum conductus*," *I am responsible for 32 cents*: and whole line may be rendered; "*They have lent me 32 cents—not enough to pay the*

*Letters to Lucilus, 53 and 83.

doctor." If we suppose that three drachmas only, instead of two, or 48 instead of 32 cents, was the doctor's fee, and remember the comparative value of money, then and now, we need not wonder after all, that some of our confreres of those times got rich, and even possessed slaves; as is said in a comedy, entitled "*The Captives*," to have been the case with a doctor Menarcus.* I pre-empt similar illustrations from other poets, but shall, I trust, be pardoned for adducing from Plautus a pun at the expense of our fraternity. In the little scene of "*Rudens*" two slaves exchange the following pleasantries:

"*Ut vales?*" "*How are you?*"

"*Quid tu, num medicus quaeso es?*" What is that to you? are you a doctor, pray?"

"*Imo, edepol, una littera plus sum, quam medicus.*" "Yes, by Pollux, and one letter more than a doctor."

"*Tum tu est mendicus.*" "Then you are mendicus, (a beggar,) and not medicus."

"*Tetigisti acu.*" "You have hit it."

The facts, then, in respect to the medical profession in ancient Rome are simply these: For a long time after its foundation, medicine was practiced at Rome under the patriarchal form, as before explained. In the time of Caius Marius, however, the city had become well supplied with physicians. But Asclepiades was mainly instrumental (B. C. 63) in introducing scientific medicine, as then understood by the Greeks, and as laid down especially by Hippocrates nearly 300 years before. Meanwhile, of the native Romans, only slaves, male and female, were physicians at Rome; and this continued to be the case till Cæsar decreed to all who practiced medicine the rights of citizenship. It is, therefore, not strange that the low social rank of the early Roman physicians prevented them from gaining a conspicuous place in history. In Athens, on the other hand, it was forbidden by law that a slave or woman should practice medicine; and thus a dignity was imparted which secured its transmission to succeeding times.

Galen came to Rome, from Alexandria, then the best school of medicine in the world, in A. D. 159, being 28 years of age. But he met with so much opposition from professional brethren, whom he in turn denounced as ignorant quacks, that he returned at the end of five years to Pergamus, in Asia Minor, his native place. He was, however, soon recalled, to attend the Emperors Marcus Auralius and Lucius Verus; and having cured the two sons of the former of fevers, which the other physicians had predicted would prove fatal, he attained a distinction which enabled him to defy the powers and finally to ruin the credit of his former opponents. His writings were regarded as the supreme authority in medicine, and especially in anatomy, for 1,400 years after, or till Vesalius published his work on the structure of the human body, in 1543; and in the practice of medicine his authority was not materially shaken till a century later, and when the importance of Harvey's discovery of the circulation of the blood began to be appreciated.

*Meniere Etudes des Poetes Latins.

It requires a great mind to appreciate the true dignity and value of our art. The rights accorded to practitioners of medicine by Cæsar, were therefore confirmed by Augustus, Vespasian, and several succeeding emperors. Augustus loaded his freedman, Antonius Musa, with wealth, for having cured him of a dangerous illness; raised him, by consent of the Senate, to equestrian rank; erected a bronze statue to his honor, near that of Æsculapius; and at his instigation conferred important privileges on the whole body of the profession residing in the city. (Watson, p. 98). Subsequent emperors did not, however, adopt the liberal policy of their predecessors. Nero patronized the audacious and vulgar Thessalus, and we find that within three centuries after the time of Galen, the practice of medicine had again fallen mostly into the hands of slaves; and that the Code of Justinian, promulgated about A. D. 500, fixed the legal price of physicians, male and female, at 60 solidi, or \$257 12.

Thus Rome constituted no exception to the adage with which this article commenced, and Pliny was simply mistaken in his date; being led into the mistake by his prejudice against the profession, and the desire to show that the class of educated physicians is of very little importance to the commonwealth.

Westminster Hospital.—*Epilepsy for thirty-two years in a man aged forty-four, with Discoloration of the Skin from nitrate of silver; Operation of Castration.* Under the care of MR. HOLTHOUSE.

Among the causes of epilepsy mentioned by various writers, extreme sexual excesses are considered as not the least important. They would appear to have much influence on the frequency of the fits, as is shown in the narrative of the following case, the notes of which were taken by Mr. H. Ponsonby Adair, house-surgeon to the hospital. There are cases on record in which castration has been resorted to as a means of relief. In one reported by J. P. Frank, the *aura epileptica* began in the testicle, and it is asserted that a permanent cure followed castration.

This operation is much practiced among the Eastern nations, for the sole purpose of depriving their slaves of manhood; and Mr. Curling informs us, in his work on the "Diseases of the Testis," that in Italy it was once frequently performed on account of its effects on the vocal organs.

Eli B——, aged forty-four, widower, native of the United States, bookseller, was admitted into Luke ward, in the above hospital, on the 4th of January, under the care of Mr. Holthouse, in order to have the operation of castration performed for the cure of epilepsy.

The patient is one of fourteen children, of whom eleven are living and healthy; his father is alive, aged eighty-four, and his mother died at eighty. There is no insanity in the family, nor is any mem-

ber of it afflicted with epilepsy. He was a healthy child till he was ten years of age, when he commenced to practice masturbation, and soon after had an epileptic fit, in which he bit his tongue. This was followed by severe pain in the head, and incapacity for exertion next day. The fits recurred every three or four weeks. They came on suddenly without any premonitory symptoms. During the first two years he took "skull-cap tea," without effect; his diet was also regulated. He still continued to practice self-abuse, and did not finally relinquish it till he was twenty-two, about the time when he began to take nitrate of silver. For two years he tried homœopathy, the fits increasing in severity. He was at school up to the age of fifteen, when he tried a sea-voyage, but without benefit. Having returned, he sailed for South America, where he remained two years, the fits being as frequent as before. While at New York he contracted gonorrhœa, having been accustomed to frequent sexual intercourse from the age of sixteen, in addition to the habit of self-abuse. He remained in New York for a few months, trying various remedies, among them sulphate of zinc, but without relief. He went again to the south for a few months, and upon his return he placed himself under the care of Dr. Kissam, who prescribed nitrate of silver, in doses of one-eighth of a grain, three times daily, and in two months it was increased to half a grain. Very soon after he began to take this remedy the severity and frequency of the fits began to decrease, and he was so convinced of its efficacy, that he continued its use for about eight months, against the advice of Dr. Kissam, who feared it might affect his skin, which, indeed, it did to some extent, giving it a blue tint. At the end of this time, the fits left him for a period of two years, having gradually decreased in frequency under the use of the nitrate of silver. From the time of his contracting gonorrhœa till his marriage, he abstained altogether from sexual intercourse and the habit of self-abuse, so that during the whole time that he was taking the nitrate of silver he had no extraneous sensual excitement; yet during this period he says that he was constantly troubled with nocturnal erections, and frequent seminal emissions. Being now twenty-four years of age, he again became addicted to sexual excesses. He left his wife and his business for several months, and traveled; the fits, however, recurred every three or four weeks, and were very severe. On his return his wife died, and he remained a widower six years, abstaining altogether from sexual excesses, although frequently troubled with erections. During the six years he broke his arm, several fingers, and his leg twice, whilst in the fits. At the age of thirty he married a second time, the fits having increased in number and severity. He was often compelled to send his wife into the country for a day or two, in order to avoid sexual excitement. The fits now recurred daily. His wife died a year after marriage. After this he again abstained from sexual excesses. Dr. Horace Green, of New York, now cauterized his larynx daily with nitrate of silver, and at the end of three or four months he would be free from fits for nineteen days; when they did recur, they were so slight that he scarcely

lost consciousness, and did not fall down. This plan of treatment was pursued for two or three years, at the end of which time he became attached to another young woman, which revived all his old amatory feelings, and the fits began to increase in frequency, recurring at intervals of fourteen days, when they would continue daily for a week, and then cease for fourteen days more. Galvanism was now tried with some slight beneficial effect. Next arsenic, in the form of Fowler's solution, which he continued till the fits recurred daily, and he became so prostrated that he was confined to his bed. For a long time he took iron to neutralize the effects of the arsenic, but for months he was compelled to walk on crutches. He came to England two years ago to have tracheotomy performed by Dr. Marshall Hall, who had advised it when he saw the man in America. Dr. Hall died soon after the man's arrival, and he went to Paris, and was under the care of M. Nèlaton. Afterwards he placed himself under M. Trousseau, who gave him belladonna, which affected his vision but not his fits. Dr. de Lassiauve next treated him with camphor for four months without effect. He returned to England and was under Mr. Simon, at St. Thomas' Hospital, in order to have castration performed, in which he had great faith, for he attributed his fits chiefly to sexual excitement, which still troubled him much; but his wish was not acceded to. He took bromide of pottassium without any benefit, and then the nitrate of silver for two or three months, in half-grain doses three times a day. The skin became darker than before, and the fits recurred daily. He next went to Germany, and was there sounded for a stone in the bladder on account of frequent micturition, which he has had since infancy. No calculus was present. He was an inmate of the hospitals of Vienna, Prague and Dresden. He left the latter in October, 1858, and was admitted into the Westminster Hospital, under Dr. Radcliffe, on the 30th of the month, and remained in two months, during which period he took quinine and iron, and camphor, but without avail. Since his second wife's death he has entirely abstained from sexual intercourse, though he has been constantly troubled with nocturnal erections, and occasional seminal emissions, and these continued up to the time when he came under the care of Mr. Holthouse, to whom he applied to perform castration, which after much deliberation he consented to do; and it was performed upon both testicles on the 4th of January, 1859, under the influence of chloroform. Two or three hours afterwards there was considerable hæmorrhage, which was checked by the application of cold. He had one fit during the hæmorrhage. His face has a bluish-slate tinge, which pervades the body, but the color is darkest on the face. His fits are of the rotary kind, preceded by a sudden scream, and lasting not more than a minute, and when over, he is quite himself again. In the fit which he had while in bed after the operation, he did not scream, but merely struggled violently.

Jan. 5th.—He had another fit this morning.

6th.—The fit recurred early this morning.

7th.—At four this morning another fit occurred. He says that after his second marriage the fits frequently followed immediately on the act of connexion.

8th.—Has had no fit at all to-day.

9th.—Had a very slight attack this morning, scarcely more than a giddiness for a minute. Altogether, since the operation, the fits have been exceedingly mild.—*London Lancet*.

BARTON'S OPERATION FOR STRAIGHTENING THE KNEE JOINT BY EXCISION OF A WEDGE-SHAPED PIECE OF BONE.—DR. MASON WARREN, recently read before the Boston Society for Medical Improvement, a very interesting case of this.

The patient, a man 25 years of age, applied to Dr. W., in September, 1850, "on account of a great deformity of his limb, owing to an anchylosis of the knee-joint, the leg being bent at nearly a right angle with the thigh. He stated that his prospects had been destroyed and his life rendered wretched by his infirmity; and wished, if anything could be done for him short of extreme danger to his life, that it should be attempted. The history of the case, as given by him, was this: In November, 1841, he fell a distance of three feet, striking the knee. Three days after the fall, the knee began to swell and become painful. This went on for four weeks, when it was punctured, and a pint of watery fluid escaped. It continued to discharge for fifteen months, during which time many small pieces of bone came away. The opening finally healed, leaving the joint and limb in its present distorted position. His hereditary tendencies were scrofulous. In the erect position, resting upon the sound limb, the lame foot is seven and a half inches from the ground, but he can limp about with a high-heeled boot.

"I informed the patient that the only operation which suggested itself to me, was Barton's operation, which had apparently been already described to him, and at once he requested to have it performed. I advised him to enter the hospital for the convenience of apparatus, which he did. Some of his friends attempted to deter him from running any risk, but he said he was determined either to undergo the operation suggested by me, or to have the limb removed, as he could no longer bear the pain and mortification of his condition.

"On the second of October, the operation agreed upon was thus performed: A V-shaped incision was made through the skin just above the knee-joint, the base of the triangle, two inches wide, presenting outward, with the apex at the inner side of the limb. The flap was dissected up and the bone exposed, the other textures having become atrophied from disease. A wedge-shaped piece was sawn out of the femur, the incisions not being carried quite through, so as to avoid the artery. The remaining portion of the bone was then broken; the flap was secured in its place, and the knee placed

on a double inclined plane, and firmly fixed to it. There was no hemorrhage.

“On the following day, the patient said he had passed a restless night, but was free from pain. The limb was dressed on October 7th, and placed on a splint with a hinge and screw, so that it could be extended without any shock to the joint. By the 20th the limb had been gradually brought to a straight position, and on the 29th the bones had united, and the wound was healed. Some time after this, he had a febrile attack, in the course of which the union became somewhat less firm, and threatened to dissolve; the system showing its scrofulous tendency. He gradually recovered, however, and left the hospital.

“About a year after his discharge, this gentleman presented himself to me, well. The limb was but very little shorter than the other, and with a pair of large trowsers the difference in the shape of the two limbs could scarcely be distinguished. He walked well with a cane, and the improvement between his present upright appearance in walking and his former painful method of locomotion, would have almost prevented him from being recognized as the same individual.

“In a recent conversation with Dr. Barton—whose retirement from the profession in which he acquired so much honor, is deeply to be regretted—he informed me that when he first began these operations, great danger was apprehended from the supposed interference with joints, or their vicinity. But he at once demonstrated what afterwards seemed sufficiently evident, that the delicate structure of the joint had, in these cases, already been destroyed, and that the bones might as readily be interfered with at this point as in their continuity. In some cases greater symmetry may be gained by making the excision directly from the joint rather than above it, as there is then presented a much larger surface of bone. There are also other advantages. I have seen a patient thus operated upon by Professor Mütter, with the most complete and gratifying success. Dr. Buck, of New York, has also done the operation successfully.—*Boston Med. and Surg. Jour.*, Dec. 23, 1858.

DIABETES.—Dr. ALONZO CLARK called the attention of the New York Medical and Surgical Society to the history of two cases of diabetes, “in which he had resorted to a somewhat novel method of treatment, with apparent benefit. The first case was that of a physician, aged 62, residing in the central part of the State of New York. He had naturally a robust constitution, and when in health had an average weight of 220 lbs. He stated that for the past forty years, he had been actively engaged in the practice of his profession, and that he had enjoyed uninterrupted health until last spring, when his suspicions were excited by the occurrence of frequent micturition, accompanied with an increase in the amount of urine passed. He examined some of his urine, and detected the presence of sugar,

fermentation taking place readily when the fluid was allowed to stand in a warm room. Its specific gravity was 103. Gradually he grew worse, muscular power being considerably diminished, and during the months of June and July the urine still continued saccharine, and increased in quantity to a gallon per diem. At this time his strength was overtaxed in attending to the practice of another physician. He continued at work, however, until about three weeks ago, when his failing health induced him to abandon his practice, and come to New York for advice. He arrived here three weeks since, and consulted Dr. Clark. The quantity of urine passed at this time was about the same, as also its specific gravity, and chemical examination revealed the presence of a considerable amount of sugar. The fluid responded to the fermentation test in twelve hours, *tortulæ* were formed in six hours, and the application of Trommer's test yielded a pretty abundant deposit of the red oxide of copper. Amongst the prominent symptoms were dryness of the mouth and skin, thirst, and constipation of the bowels, the faces being unnaturally hard. In the management of his case, Dr. Clark was led, from the experience of a previous one, to advise the use of bicarbonate of soda in doses of 11 grains, repeated as often as possible, provided the urine was not rendered alkaline, or the stomach nauseated. He also ordered counter-irritation to be established at the back of the neck, the idea of doing this having been suggested by the experiments of Bernard, who was able to cause a diabetic state of the urine by irritating the medulla oblongata. A mixed diet was allowed, vegetables in moderation, and hard biscuit being included, and the patient was cautioned respecting the use of water, which was to be taken only at meal-times, and at no time freely. With these directions, he went into the country on the 31st of August, and remained until Wednesday of that week, when he again visited Dr. Clark. During the interval of absence a vast improvement had taken place. He could now sleep eight hours, and on rising, passed less than a pint of urine, the quantity passed daily not exceeding three pints. He complained no longer of thirst, his lassitude was gone, his bowels were natural, and his weight had increased 7 lbs.; his urine, when examined, was found to have a specific gravity of 102.20, and when subjected to Trommer's test, gave the black instead of the red oxide of copper. The absence of sugar was further evidenced by the fact that the fluid was allowed to stand in a warm place over forty-eight hours without fermentation. *Tortulæ* were likewise absent, and in their place was a moderate number of crystals and oxalate of lime. The patient was sent home to continue the same plan of treatment.

"The *second case* was not as striking as the first, but yet was one of diabetes, treated in a similar way and with similar results. The patient was a gentleman who had once been under the care of Dr. Van Buren, and was seen by Dr. Clark two years ago. He then stated that he had suffered from the disease nine years previously, and that under the use of bicarbonate of soda, he had recovered and remained well for more than six years. At the time he applied

to Dr. Clark, he was passing about a gallon of urine daily, which, on examination, was found to contain sugar; he also suffered the usual symptoms of the disease. He was put upon bicarb. soda, and a stimulating liniment, which, when rubbed upon the back of the neck, produced a sore that lasted for several weeks. During this period, he improved rapidly. Dr. Clark remarked that the results in these two cases were so satisfactory, that he thought himself warranted in recommending the same means of treatment for further trial.

“At a subsequent meeting of the society, Dr. Clark made a further report concerning the treatment of diabetes by blisters to the neck and administration of bicarbonate of soda. Since the time of the last notes, he had had three cases in which to test it. The first passed a gallon of urine a day, and used soda for three weeks without benefit. The stomach was disordered by it, and the patient unable to continue the treatment.

“The second passed seven quarts a day, of specific gravity 100.43; took soda for two and a half weeks, after which the amount went up to eight quarts, of specific gravity 100.4. This case left the hospital before treatment could be conducted to a close, or the remedy fairly tested.

“The third case, which passed ten pints per diem under blisters and soda, did not improve at first, but the dose of soda, being carried up to 3iiss a day, the urine soon diminished in amount to six pints, of specific gravity of 100.28. That day only two quarts had been passed, and he seemed improving.—*New York Med. Jour.* Jan., 1859.

SCIENTIFIC AND PRACTICAL MEDICINE—There are two very remarkable characteristics of the medicine of the day: one is the great advance made in laying a *scientific* basis for the practice of the healing art; the other is the vast amount of successful practice which is carried on by those who have neither time nor opportunity for scientific pursuits. On the one hand, we have a precise physiology, supported by profound chemical and physical research, and a minute pathology, reared upon a platform whose pillars are the microscope and the test-tube, and whose approach is over manifold steps of minute statistical research; on the other hand, we have the remembrance and renewed impressions of bedside experience towards guidance in the treatment of disease. The former come to us chiefly from the study of the *savant*; the latter are the right of every one who deals with human disorders. To appreciate the one kind, necessitates more knowledge than the mass are drilled to; to make avail of the other, is the daily duty of all at the sick man's bedside. It is found, moreover, that those who are most disposed to the attractions of the first, are least inclined to the charms of the second. We need scarcely wonder at this. The *science of medicine* captivates men endowed mainly with the reflective and analytic powers of the

mind ; whilst the *practice of the healing art* allures those of acute observation and rapidity of perception, and who anticipate utilitarian results. Both have their places, both are requisite, and it is the duty of both to cordially affiliate with each other. The practitioner of medicine must recognize in his scientific *confrere* the laborer and builder-up of much knowledge, which, becoming insensibly interwoven with the teaching of the time, endows him (how, he knows not) with axioms of scientific certitude, in whose truthfulness he may safely repose. The *savant* should feel, on his part, that in the acute practitioner exists that "*aliquid in medico quod neque dici neque scribi posse*," and to which nothing but repeated clinical experience can ever hope to give birth. We have heard a living physician of much experience and valuable common sense, assert, that though we can now *talk about disease* much more fluently and satisfactorily, apparently, than in his younger days, yet we cannot *cure* it a whit the quicker. There is much truth in this remark, the spirit of which was, twelve years back, well insisted upon by Dr. P. M. Latham, in the preface to his admirable Clinical Lectures upon Diseases of the Heart. He said :

"All things should have a consideration bestowed upon them in proportion to their importance : the question is, whether the treatment of disease has, upon the whole, had as much as is due to it.

"During the last quarter of a century, physicians have labored very hard, and, upon the whole, very profitably ; but their labor has been bestowed in unequal degrees, and consequently with unequal success, upon the objects which concern them. Pathology and diagnosis have had much more of their regard than treatment. Thus our knowledge of disease in its essence has been greatly enlarged, and our skill in detecting its present existence and seat in the living body has been made much more exact and sure ; while our ability of influencing its progress and events by medicine has not been proportionally increased."

So true is this, indeed, that it may be questioned whether we can now treat rheumatism better than in the days of Fordyce and Fothergill ; gout more satisfactorily than in the time of Heberden ; scurvy, than in the days of Sir Gilbert Blake ; diabetes, than in the time of Rollo ; or albuminuria more surely than when the illustrious physician who has so lately been taken from our side made known to us the remarkable affection known over Europe as "Bright's disease of the kidney." And yet what laborious chemical and microscopic investigations have been undertaken in modern times, in illustration and explanation of the pathogeny of these diseases ! How scientifically their causation has been attempted to be shown ! How admirably the therapeutic doctrines have been made to flow from what *science* has told us of these causes of suffering ! And, nevertheless, thousands, of practitioners, who have comparatively little knowledge of the scientific relations of these diseases, are as successfully treating them as their nature permits ; and others, to whom their chemical microscopic exposition is familiar, make very often sorry attempts at a satisfactory *clinical* result. Whilst some endeavor

to prove that the scientific medicine of the closet must necessarily be the basis of safe therapeutic interference in human suffering, others seem to be led to the belief that the more scientific the pathology, the less reliance is there to be placed in any system of treatment.

Such appears to us to be the fundamental belief at the bottom of the new medical philosophy of the school of Vienna, and of which Skoda is the high priest. We have a new school, it seems, called *Skodism* and its disciples are termed *Skodists*. We are told by Dr. Gallarvardin,* that amongst the clinical teachers of Germany there is one who is making a universal reputation by *skepticism*. This is Skoda. Medicine has never witnessed a doubter so absolute as he is. He is not only a doubter in theory; he is a fervent skeptic in practice. He conceives it to be his duty to teach practical skepticism at the sick man's bedside. It is said to be impossible to divine the remedy which Skoda will use in any case. Every year, during nine or ten months of clinical instruction, he employs on his twenty-eight patients *in succession* all the more classical and celebrated means of cure! And with what intention? Why, merely to convince his class that every system of medication is always and completely inefficient! If after any plan of treatment there supervenes a prompt and very marked amelioration, of which explanation must be rendered, this great Pyrrhonist in our art then attributes all the honor to the natural course of the disease.

"A young man, of nineteen, very robust, comes into the hospital on the 11th of May, on account of a pneumonia of the right lung, of a highly inflammatory and severe form.

"On the 13th and 14th Skoda causes him to take infusion of foxglove, which induces six stools a day.

"On the 15th, a pound of blood is drawn from his arm by his orders.

"Next day (the 16th) the pulse, which on the preceding evening was at 106, falls to 66."

To explain so notable and prompt a modification of the pulse, Skoda expresses himself in these terms:

"Perhaps it is the effect of the bleeding—such things have been; perhaps, too, it may have been the effect of the foxglove—that has been seen too; it may also be considered as connected with the natural evolution of the disease—that has been seen too."

Skoda, we are told, reasons habitually after this fashion, never denying in a very decided manner. In this way, little by little, he *insinuates* doubt into the minds of his disciples, all the more surely that he does not insist on its reception; so that, finally, they insensibly lose all practical faith, and raze from "their medical vocabulary the word *causality*, just as their master does." Skoda, we are informed, never quotes a single physician who lived before the present century, thinking it perfectly useless to know how the problems of scientific and practical medicine (always the same at all times,

* Edinburgh Medical Journal.

and in all places, having always for their subject "man sick") have been discussed and resolved, not only by Hippocrates, Galen, Baglivi, Stahl, Boerhaave, but even by the men who have shed such lustre upon his own school of Vienna, viz: Van Swieten, Stoll, Hildebrand, and the two Francks.

THE PRICE OF LIFE.—It was lately said, and truly enough, by one of the most eloquent and thoughtful of Englishmen, that it is a melancholy thing to reflect how continually we all of us live upon the lives of others; and that in two ways, namely, upon lives which we take, and upon lives which are given. For that life is taken in unnumbered instances in which, under the influence of crushing commercial pressure, or tempted by the bait of higher rates of pay, men are occupied, without sufficient protection or guardianship, in dangerous employments involving more than an average loss of life, for which life we pay, thoughtlessly, in the price of the commodity, which so far is the price of blood. It is, indeed, a well-established fact that, even at the present day, there is scarcely an art or science which has not some concomitant circumstance of danger or disease. And thus, though slavery is numbered with the things that are passed, and we should shrink with horror from the purchase of human bodies, we bargain daily for human life. "A cry from the potteries" has told such a tale of the population of North Staffordshire. The able writer who assumes this name has not hesitated to assert that "the disabled potters are human sacrifices whom the dust of flint and burnt earths, the heat of the colossal ovens, the draughts of cold air through those blind and shapeless burrows, and the strong poisons of the mystery, force into early decrepitude. Amongst them all, the dipper is conspicuous. He breathes the arsenic of the glaze, and must imbrue his hands in the mixture. He has swellings of the joints; he is paralyzed; he dies not unfrequently while yet a boy, in bodily torture, and raving mad. Such are the potters' broken vessels, and in their behalf there arises naturally a cry for justice."

Absolute denials have been lavished in reply to this statement. It is asserted that the mortality is not high; that the pretended frequency of disease, insanity, and early death, has no existence. If this be so, it is well that the calumny should be brushed off; but it is assuredly not harmful that men should be reminded of the excessive mortality which is still incidental to many occupations, arising partly from pressure of population, but more "from carelessness and cruelty in masters and consumers, from desire of cheapness, or blind faith in commercial necessities."

The Factory Inspectors' Reports for the half-year ending 31st October 1858, just published as a blue-book, show a painful total of accidents, with forty-one deaths. The work-shops of the world are replete with dangers to the life and health of the workers. It is

just to recognize the fact that science has striven to abate these incidents of death, proportionally with the development in manufacturing skill and industry. But Sheffield grinders and Whitechapel sempstresses, the glass-blowers of Whitefriars, the miners in our collieries, and, above all, the guardsmen of our army, know but too well that their span of life is unnaturally contracted by the influences of their occupations.—*Lancet*.

From the London *Lancet*.

The "Dead-Alive." By R. B. NASON, ESQ., M. R. C. S.

SIR:—An article, "The Dead Alive," in your last impression* demands of me a veritable statement of the case alluded to. The subject of the inquiry is still living, and some time past has afforded me scope for observation.

I have only been waiting for a termination of the case, either in convalescence or death, to enable me to give to the profession, through your valuable columns, a full and truthful history of this rare and curious case, replete with interest. The exaggerated statement which has gone the round of the press, has produced such great curiosity in this immediate neighborhood, that I have been applied to by many parties, professional and non-professional, to be permitted to see the case, the parents of the patient having refused admittance to all strangers.

The case having extended over a long period, and fearing a detailed account might occupy too much of your valuable space, I have condensed the matter as much as possible; but should the profession consider the case worthy of a more enlarged history, I will gladly at some future period meet their wishes, as far as my rough notes, aided by memory, will supply it.

In August, 1858, I was requested to visit Miss Amelia Hinks, aged twelve years and nine months, daughter of a harness-maker, and residing with her parents in Bridge-street Nuneaton. She was supposed to be suffering from pulmonary consumption. I found her much emaciated, and complaining of headache; great lassitude; loss of appetite; short cough; secretions morbid; catamenia not appeared. I prescribed an alterative, to be taken at night, and a ferruginous tonic three times a day; a generous, though mild, nutritious diet, which she continued some time with benefit. I could not detect any chest disease. She then went into the neighborhood of Leamington, for change, to visit some friends, and after a short stay became much worse. Her parents, being apprized of her state, fetched her home as soon as possible. On her arrival I was requested to see her. I found her very attenuated, and complaining of great debility, headache, and loss of appetite; tongue clean; bowels confined. From this time she began to refuse food and medicine, and

her friends wished her not to be disturbed for anything, and daily and hourly anticipated her death. She was watched night after night in anticipation of that event happening, and on the 18th of October, about half-past three A. M., she apparently died. She is said to have groaned heavily, waved her hand, (which was a promised sign for her mother to know that the hour of her departure was come,) turned her head a little to the light, dropped her jaw, and *died*. In about half an hour after her supposed departure she was washed, and attired in clean linen; the jaw was tied by a white kerchief; penny-pieces laid over the eyes; her hands, semi-clenched, placed by her side; and her feet tied together by a piece of tape. She was then carried into another room, laid on a sofa, and covered with a sheet. Appeared stiff and cold: two large books were placed on her feet, and I have no doubt she was considered to be a sweet corpse.

About nine A. M. the grandfather of the supposed dead went into the death-chamber to give a last kiss to his grandchild, when he fancied he saw a convulsive movement of the eyelid, he having raised one of the coins. He communicated this fact to the parents and mourning friends, but they ridiculed the old man's statement and said the movement of the eyelids was owing to the nerves working after death. Their theory, however, did not satisfy the experienced man of eighty years, and he could not reconcile himself to her death. As soon as I reached home, after having been out in the country all night, I was requested to see the child, to satisfy the old man that she was really dead. About half-past ten A. M. I called; and immediately on my entrance into the chamber I perceived a tremulous condition of the eyelids, such as we frequently see in hysterical patients. The penny-pieces had been removed by the grandfather. I placed a stethoscope over the region of the heart, and found that organ performing its functions perfectly and with tolerable force. I then felt for a radial pulse, which was easily detected, beating feebly, about 75 per minute. The legs and arms were stiff and cold; and the capillary circulation was so congested as at first sight to resemble incipient decomposition. I carefully watched the chest, which heaved quietly but almost imperceptibly; and immediately unbandaged the maiden, and informed her mourning parents that she was not dead. Imagine their consternation! The passing-bell had rung, the shutters were closed, the undertaker was on his way to measure her for her coffin, and other necessary preparations were being made for her interment. I ordered friction to the rigid limbs, moderately warm flannel to be applied, and other restoratives; and in about two hours she spoke, and requested to be taken to her mother's room, having been in the winding-sheet seven hours. She told her friends that she heard all they said, and knew they were laying her out; and that she heard the passing-bell ring, but could not speak. She passed a very large quantity of limpid urine; and refused food.

At four P. M. the following day she groaned heavily, bid the bystanders farewell, and relapsed into the same cataleptic state, and remained so six hours and fourteen minutes. I saw her in that state,

and tried to raise her; she fell, listlessly regardless of position or danger; and in whatever form the body was placed, it remained. She took no food between the attacks, but asked for water to wet her lips; and requested that nothing more in the shape of food might be given her, for she did not wish to eat nor drink again until she did so in heaven. For a whole week she took nothing, but lay perfectly quiet, with her eyelids firmly closed and her teeth in apposition. At the expiration of that time I told the parents of the patient that I considered it their duty to insist upon food being taken. She was coaxed and threatened, but all in vain. She would not answer any question put to her, and whatever food was forcibly put into her mouth she ejected. I then, by means of a gag and an elastic tube, fed her with beef-tea, arrowroot, and other nutritious food. At this time she commenced moaning, and continued night and day, never ceasing for ten days.

After this painful state of things her friends thought she must sink from exhaustion; but she did not appear to have sufficient power to stir; in whatever position she was placed, she remained, until changed by some of her attendants.

Her mother now drew my attention to the absence of kidney secretion, and assured me that for many days she had not voided urine. As there were more utensils in the room than the one set apart for her special use, I desired all to be removed but one, taking care that no other person made use of it. Ten days elapsed, but still no urine was discovered. I then told her mother that it was impossible—perfectly inconsistent with life; and asked if there were any closet or secret place in the room to which she had access. There was one, but it was filled with dirty linen. I asked permission to search it, when I found most of the linen saturated with urine. She had watched the opportunity of her friends' absence, and gone quietly into this closet and relieved her bladder.

At two A. M. one morning, whilst her parents were sleeping, she got out of bed, set fire to various articles in the room, and made her escape into the street in her night-dress, crying, "Murder!" The fire was, fortunately, extinguished, through the great presence of mind of the father, though at considerable cost, his hands being badly burned. She now began swearing most blasphemously, and continued to do so without intermission for sixty hours, after which she became exhausted, and relapsed into a state much resembling her former condition, in which state she has continued to the present time. Her eyelids are firmly closed, her teeth set fast, and muscles rigid. Her bowels are moved about once a week, and she passes urine daily into the bed; not, I believe, from any want of power of the sphincter. For the last month there has been great difficulty in feeding her by the mouth. The determination she evinced to resist food was extremely annoying; but I felt inclined to be as determined as she, and from that time have fed her three times a day by the rectum, giving her about half a pint of strong beef-tea and wine, alternately with the same quantity of new milk, arrowroot, eggs, &c. After the first lavements, and when I was

prepared to operate the second time, she raised her hand to her mouth, and repeated the movement two or three times, evidently wishing to convey the impression that she preferred food to be administered in a more agreeable manner; but I found, on trying to give her food by the mouth, that she was as obstinate as ever. I therefore persisted in administering food by the rectum. I ordered a certain number of biscuits to be placed on a chair near the head of the bed; the next morning they numbered one less. In the evening I requested the number might be made up, and exceeded by three; in the morning three had vanished. We found unmistakable evidence that she had eaten them.

Dec. 4th.—Her friends beginning to despair of her, and feeling anxious to know what physical strength remained, as also whether she had the will to eat and power to masticate, I devised a scheme which, if carried out properly, would not only prove to her friends that she could open her eyes and mouth too if she thought she was unobserved, but in a great measure aid me in my diagnosis, and give me a hint as to my future treatment. I said in an audible tone, in the presence of the patient, that I insisted on the father and mother sleeping in another apartment; for that she, by her conduct, was destroying their health. She should be locked in the room by herself all night. Having said so, we arranged that the father should be secreted in a closet in the chamber, with the door sufficiently open to allow him to watch her movements through the night. At one A. M. she raised herself upright in bed, opened her eyes, looked all around the room, turned down the bed-clothes, and got out of bed as nimbly as ever, and walked directly to a quantity of food, which had purposely been laid for her. She turned it over, tasted, and finally took a good supply into bed, quietly drawing the bed-clothes over her.

8th.—It is five weeks to-day since she spoke to any one. Her eyelids have been closed the whole of the time, and her mouth, too, excepting when forcibly opened; the pulse has varied very little, between 70 and 80. Her body appears much better nourished.

Having now given a description of the case to the present time, it remains for me to give my opinion as to the nature of this mysterious case. Considering that her mother has been at times hysterical, and that there has been sufficient evidence of the early development of the generative organs in most of the female members of the family, coupled with most of the prominent features of the case before us, and from many trifling though important incidents which from defective memory I have omitted, I am inclined to consider it one of hysteria of an aggravated character, complicated probably with a morbid condition of the brain. I entertain hopes that, provided I can sufficiently nourish the body until the uterine organs are more fully developed, my patient may continue to be "*The Dead Alive.*"

I am, Sir, your obedient servant,

RICHARD BIRD NASON, M.R.C.S., L.S.A.

Bridge-street, Nuneaton, December 14th, 1858.

Observations on the Isthmus of Panama, and on the Hospitals of Havana. By G. R. B. HORNER, M.D., Surgeon U. S. Naval Hospital, Warrington, Florida. (Communicated by W. WHELAN, M.D., Chief Bureau Med. and Surg. U. S. N.)

The discovery of gold in California, ten years since, has vastly increased the transit of persons, merchandise, &c., across the Isthmus—greatly augmented the importance of this strip of land, and, indeed, rendered it the great highway of nations. The most important portion at this time is the western, or most northerly of the Republic of New Grenada, which forms nearly a semicircle. This is bounded on the east by the Caribbean Sea, west by the Pacific, and north by Nicaragua and Costa Rica. The narrowest part of the Isthmus lies between Panama and Chagres, a small town at the mouth of the river of that name, and about forty miles from the former town; but the latter having a small, insecure harbor, Aspinwall has been built on the island of Manzanilla, in Navy Bay, some miles south of Chagres, and a substantial, well-graded railroad is constructed between the two places. But this was accomplished at the expense of more than a thousand lives, chiefly those of Chinese laborers. Miasmatic fevers were the principal causes of the mortality. Many, however, died of neglect and bad treatment. When a Chinaman got sick, it is said, it was common to lay him down in the woods, with some food and water by his side, and let him lie there until dead, or well enough to get away. Other patients were sent down to the hospital of the railroad company at Aspinwall, from whence every two weeks about two hundred were sent to New York, so that the precise mortality among them was not ascertained.

The railroad runs through several extensive morasses—densely overgrown with palms, wild bananas, bushes, vines, and large timber—strikes the Chagres River where the Gatón empties into it, runs up the right bank of the former, crosses it at Barbacoas by an iron bridge, passes up to Gorgona twenty-eight miles from Aspinwall, thence through a valley, bounded by several thickly wooded, very verdant mountains, and attains the summit level, which is only 487 feet above the level of the sea. From there the road gradually descends to Panama, through the valley of the little stream termed Rio Grande, perhaps in ridicule. Last year a party of men and officers from our squadron, headed by Com. Paulding and Col. Totten, chief engineer of the road, crossed the Isthmus by the railroad, closely inspected the route and bay of Panama, and reported the feasibility of a ship canal along the same route. The colonel estimates the cost at \$70,000,000 for one 300 feet wide and 30 feet deep, with several locks in its course, and a breakwater at Aspinwall. The greatest obstacles to be encountered are the scarcity of native laborers, and the diseases incidental to foreigners, especially of the white race.

The bay of Panama and its numerous islands might afford an-

chorage for all the ships of the world which could be brought there ; and the bay of Aspinwall could accomodate as many as would probably ever be collected in it, being two miles wide and three long ; but being exposed to the north during the winter, when the wind blows strongly from the sea, it would require at least one very long breakwater, projecting into it from the eastern side of the entrance. All the Isthmus traversed by the railroad, and visible from any part of it, is hilly and mountainous, has a diversity of soil, abounds in several varieties of basaltic rocks and volcanic remains, and is very fertile naturally. Its vegetable productions are numerous—and among them are yams, maize, cassana or tapioca, coffee, bananas, plantains, palm-nuts of various sorts, including the cocoa and cabbage, which affords much oil. The mango, lime, orange, small cheremaya, a large yellow species of annona, weighing sometimes three or four pounds, and belonging to the same class of plants as the former ; the sour sop, abbacata or calligator pear, and the pawpaw as large as a musklin, are likewise produced ; but the orange, from neglect in cultivation, is very rare. Indeed, so poor is agriculture throughout the country, that much more of all its products is due to nature than to its inhabitants.

Papyrus abounds in the swamps ; some species of cinchona are said to grow in the forests, and the cedron-bean (used as an antidote for poisoned wounds), on a small tree below Panama. Many species of cactus and of parasitical plants are found ; and the latter are seen covering the monarchs of the forest, feeding upon their juices, until the stoutest trees die and crumble to dust. In time the parasites decay ; those which had formed the longest vines, sweeping from the highest branches down to the ground, fall to pieces, nourish it, and help the growth of the young trees springing up in place of those destroyed. Near the sea-shore the mangrove, as if on stilts, elevates itself upon its limb-like roots, and spreads its branches high above the water, preventing all access ashore to every kind of vessels.

Both along the shores of Panama and Aspinwall, coral is abundant. Many reefs are formed of it, some are old and dry, others new and fresh ; and the former, when crumbled, mixed with decomposed shells and sand, forms a very productive soil for some vegetables. Some of the finest land is upon the sides of the Chagres River, which arises in the eastern part of the Isthmus, winds along to the westward, then to the northward, just before it reaches the railroad and Gorgona ; is navigable from Cruses, seven miles above, and averages about seventy feet in width, as far as Gatón. From thence it increases in size, until it reaches the town of Chagres. The banks of the river are bold, overhung with shrubs, vines and trees, and produce the sugar-cane luxuriantly.

The island of Manzanilla is on the eastern side of Navy Bay, about two miles around ; it is formed chiefly of sand and coral, and in no part exceeds eight feet above high tide. Near its centre is a swamp flooded with water, and a large pond is left near the middle of the town, which was formerly a cove ; but has been converted

into its present shape by being filled with earth next the harbor. This pond is nearly encircled by houses, receives the overflowing water from the swamp, and communicates with the harbor, beneath the railroad ; but is a mere receptacle of filth, and mostly stagnant. The people of Aspinwall are, therefore, at all seasons infected with miasmatic fevers.

The islands in Panama Bay are numerous ; some are large, all are rocky, high and picturesque, and mostly composed of sandstone, extensively used in building. Tobago is the principal island, and is several leagues around ; it contains some hundred people, produces the pineapple, some cocoa, tamarinds, cocoa-nuts and other fruits ; and has the iron-works of the English Steam-Packet Company on a promontory, projecting towards Panama. The population of this is about 6,000, that of Aspinwall about 1,500, and both are principally inhabited by negroes, mestizos, and mulattoes. The greater part of the former in Aspinwall are manumitted slaves from Jamaica, who subsist by working for the railroad company, and by peddling and shopkeeping. They drink to excess, and are devoted to music and dancing.

The animal kingdom of the Isthmus is nearly as rich as the vegetable. The waters teem with fish ; insects, reptiles, birds, and quadrupeds abound on shore. With hooks and seines are caught the red rockfish, the cavallo, a large species of mackerel, the croaker, gar, perch, and parrot-fish. The last takes its name from its being as varied in color as that bird, and tinged richly with green and blue. Mulletts, porpoises, the large green turtle, crabs, and sharks likewise abound. The turtle affords a very large part of the meat used at Aspinwall ; the cattle killed there, from being driven far and illy fed, are poor and insipid. A few sheep, some hogs, goats, fowls, turkeys, and ducks serve also for sustenance to the richer classes ; but the poor live chiefly on yams, plantains, bananas, and other vegetable food.

Among the wild animals of the Isthmus are the tiger, wild cat, mamoss or ant-bear, the deer, several species of monkeys, the alligator, and zæcæ, a large species of hedge-hog, of a brown color, and having dark stripes on his back. Alligators abound in the Chagres River and other watercourses, on the banks of which they catch fish and dogs, and within a few years have killed several persons.

Climate.—This is always sultry, never really cool or dry. The thermometer averages from 80° to 85° during the day, when the wind is blowing towards the land ; but when off of it, as it generally does after 8 o'clock at night, it falls frequently to 76°, sometimes to 74° : and then from the free perspiration and sensibility of the skin, imparts such a sensation of coldness as to make woollen clothes pleasant. At Panama the heat is sometimes above 90°, and is more oppressive than at Aspinwall, where, in spring, summer, and fall, the wind mostly blows from the sea during the day, and from the land at night. During the winter it blows commonly from the northeast in the day, and causes a heavy swell in the bay. In the summer

season it blows occasionally in squalls from that quarter, and is so stormy as to endanger ships at anchor there. After a tempest in winter, some years ago, so heavy a swell occurred, that three or four vessels were wrecked on the eastern shore of Manzanilla. One broke through the high, strong wharf of piles and planks, owned by the United States Steam-Mail Company. Another vessel was driven upon a reef opposite the wharf, broken to pieces, and wrecked on the adjacent shore, where she still lies. The range of the barometer is small. It rarely rises above $30\frac{1}{4}$ of an inch, and very seldom falls below 30 inches, so that it is not considered at Aspinwall or vicinity a good indicator of the weather. Rain falls there in showers, ordinarily during the afternoon and at night, for nine months, at intervals; but rarely from the first of December to March. During the last fall we had rain, more or less, and usually after meridian, for six days out of seven. During that period the atmosphere was saturated with moisture; clothes, books and sails were spoiled with mould; small mushrooms sprang up in quantities on the tarred ropes coiled on deck, and especially on those not exposed to the sun. The rusting of all metallic substances liable to oxidation occurs correspondingly to the moisture of the atmosphere, rendered still more corrosive by the evaporation of sea-water, charged with chlorine and saline particles.

Diseases.—The most prevalent diseases among the inhabitants may be said to be those of the bowels and miasmatic fevers; but from these they are exempt in comparison with strangers from North America and Europe. All of these, who are white, are certain in a short time to be affected with some form of those fevers, remittent or intermittent, of the quotidian or tertian type. These also, I was informed by Dr. Moore, of Aspinwall, preceded the yellow fever there, as has been observed in other countries; although it is stated by Dr. Hammund, U. S. Army,* to have followed the epidemic yellow fever, at Warrington, Florida, in 1853, when it was introduced by some recruits at the navy yard, and infected the inmates of the hospital. But the crew of the Wabash were remarkably exempt from bowel complaints and miasmatic fevers. This exemption we ascribed to the men drinking exclusively the pure rain-water collected in the vast boiler-iron cisterns of the United States Steam Navigation Company, which are filled from the roofs of their buildings, and hold many thousand gallons. The people of Aspinwall also use rain-water altogether, as they have no wells, springs, or streams convenient. That our crew's exemption from diarrhœa and dysentery was owing to this water, is proved by the case of an English ship of the line, which, I understand, had many cases, after using the water of the river Mindi—a small stream emptying into the south side of Navy Bay; and some cases of diarrhœa occurring in our crew, from the rain-water being sometimes made saltish by its being brought in open boats, which had taken in some sea-water, whilst being conveyed from shore during heavy

*See the Army Medical Statistics, lately published.

swells. Our comparative exemption from fever was owing mainly to the Wabash keeping at a distance from shore, to being thoroughly cleansed, and having her crew as little as possible exposed to the sun and malaria. Few of the men were permitted to land. But many suffered from boils, lichen tropicus, and various herpetic eruptions; some from rheumatism and neuralgia. During the last of August, 1857, about one-half were effected with influenza, which first attacked the crews of our ships of war at Panama, next the people of that town and Aspinwall, and was last heard of at the island of St. Thomas, 800 miles to the eastward. Besides the above, we scarcely had any diseases of the respiratory organs to treat—not a case of phthisis occurred in many months; but one of pneumonia, attending an attack of remittent fever with hepatitis, proved fatal last October. A man on board the *Saratoga* likewise died of pneumonia at Greytown, 300 miles north of Aspinwall.

The cutaneous affections were very numerous and troublesome to cure. Wounds and ulcers were indolent, and so irritable that the metallic lotions, as of sulph. of zinc, nitrate of silver, and acetate of lead, appeared poisonous, especially when applied to the privates; wounds and ulcers, moreover, often bled profusely; and in the treatment of the numerous cases among the passengers from Gen. Walker's army, brought to the United States, no dressings would retain the blood. This was dark, thin, plainly venous. For the cure of ordinary prickly heat, the application of diluted aqua ammoniæ was successful; but when it became scabby and formed the regular lichen tropicus, the warm bath, citrine ointment, and a solution of five or ten grains of argent. nitras were commonly used efficaciously; sometimes the flowers of sulphur or other laxatives were given. In the cure of ulcers I conjoined local and general remedies, and in that of boils I at first applied poultices of powdered linseed; but they often increased the size of the boils, were inconvenient to make and consumed a large amount of muslin. I substituted, with advantage, the pure nitrate of silver before or after lancing. In the treatment of miasmatic fevers, I used saline purgatives, mercurials, the acetates of potash and ammonia; acidulous drinks, hot and cold water bathing, and the sulph. of quinine largely, in solution with the elixir of vitriol and white sugar. The complicated case above mentioned was the only one which terminated fatally. Although the yellow fever was at Havana twice, while our ship was in the harbour not a case of it occurred in her; I saw many, however, in the mercantile and great military hospitals in its vicinity, which had been brought there from the vessels and the different posts about the city. The former hospital is on the eastern part of the harbour; and near the suburb of Reglus is a private establishment, rented and kept by two Drs. Belot. The latter hospital consists of two distinct buildings, some distance apart; but only one of them was occupied when I was there. The cases of yellow fever seen were principally convalescent, and two had been attended with black vomit. One was that of a native boy, the other that of an Englishman, and one American had died of the fever the day before. Two

dollars a day were charged for each patient, and twenty dollars for every one buried. 1331 cases were treated last year, of which from 20 to 22 per cent. ended fatally; but in November 44 out of 202 died. One of the Drs. Belot stated to me that the yellow fever was infectious, atmospheric, and epidemic, but not contagious like smallpox; that it was always worse in the harbour among the shipping; he pointed out a vessel in which a number of cases had happened, two of which were fatal; but at the same time showed me an American ship, which had been in port for two months and a half, without having had a case on board.

The worst cases I saw were in the military hospital, which stands on the western side of the harbor, near the beach, between it and the new part of Havana. This hospital was built in 1842, is of marble from the Isle of Pines, about 300 feet wide and 600 long, two stories high, forms two large courts, filled with flowers, trees and plants, and in its arrangements, conveniences and attendance, was not excelled by any other hospital I have seen in any part of the world. The wards were well planned, all opened into the galleries encircling the courts; contained 800 patients, attended by twenty physicians, a half of whom were residents, and nursed chiefly by twenty-three sisters of charity. The wardrobe, dispensary, laboratory and kitchen were spacious and well furnished. The cooking was done in fine iron ranges, burning coal. Infected clothes were purified by fumigation from a furnace in a room appropriated for that purpose. Another one is converted into a chapel; a third one contains a library, mostly of French works, and some handsome anatomical preparations. Convalescents eat in a back portico, overlooking the harbor. The food is neatly cooked, and principally consists of rice, bread, soup, beef and chicken.

Sick and wounded seamen are in separate wards, and not mingled with the soldiers. All patients lie on iron bedsteads, with linen sacking bottoms, save a few on cots. Every bedstead is supplied with two sheets, one blanket and a pillow. Between every two beds was a close stool, behind a curtain, hanging from a semicircular rod of iron, fixed at its ends into the wall. Last year, during the prevalence of the yellow fever, the hospital contained 1,200 patients per day, of which number 250 were of the above fever. It was then necessary to use the verandas as wards, and they were so wide as to hold the beds crosswise, and yet to allow persons to pass between them and the courts. In a ward containing fifty-five beds, I saw a number of cases of yellow fever indiscriminately mixed with those of other complaints, and was assured by the resident physician who attended the ward that the fever was non-contagious, and very rarely infectious in the hospital. The cases were in the primary, middle and last stages. In the first stage there was headache, injected eyes, hot skin, frequent pulse; tongue moist, and covered with a thick, white fur, and red about the edges. Those in the middle stage were more severely affected, and more jaundiced; but in none did I find the pulse very full and strong. One patient pointed to a tub of water, and said he had just thrown up blood. Two

other soldiers, in the last stage, were most distressing objects. Their eyes and skin were of a saffron hue ; their faces haggard and stupid ; their mouths expanded ; their tongues dry, brown and hard ; one of them had hiccough ; blood stained their lips ; the pulse was small, weak, frequent ; the skin cold and dry. The bed of one was deeply stained with dark blood, and this was sputtered also on the floor at the side of his bed, and that of another young, dying Spaniard. No painter could find two more horrible pictures of death to copy.

Treatment.—There was some difference in this at the private and public hospital. In the former, the first medicine given was the sulphate of magnesia, in doses large enough to purge, for several days. They were aided by cathartic enemata ; cups and blisters were applied over the epigastrium, when nausea and pain in the stomach occurred. Cups were also applied to the nape of the neck for pain in the forehead, a striking symptom ; blisters were sometimes placed upon the legs, and when black vomit supervened, Dr. Belot gave small doses of astringents—ratanhia, alum, and acetate of lead, with some opium. His patients were given for drink and nourishment, chicken-broth, rice and farina.

In the military hospital the primary treatment was likewise purging, with the sulphate of magnesia ; but it was given in the dose of 3j with gr. j of tart. emetic, and then followed by the administration of other internal remedies, chiefly astringents, of which the principal was the tinctura ferri chloridi, given agreeably to circumstances. Of the comparative success of the treatment at the two hospitals I was not informed accurately, but understood it was about the same.

The practice on board of American vessels, of giving calomel, jalap, and then castor oil, the above physicians condemned as injurious. Several hundred of their seamen died last year. One was deprived of her whole crew, and part of two others, in a fortnight, according to the statement of our consul ; and yet the practice does not seem worse than that in the Spanish men-of-war at Havana, which the admiral of the port informed me, “lost at the above time 900 seamen out of 4,000, of the vomito,” as the fever is there termed commonly, a mere symptom and effect being taken for the disease itself. Dr. Belot and other intelligent physicians regard the vomit as a mere mixture of blood, bile, and gastric juice. But although he thinks the fever non-contagious, there are many proofs to the contrary advanced by other eminent physicians ; and we might concede, at least, that sometimes typhus fever might be conjoined with it, as it is believed it was at Pensacola and Warrington, in 1853, and caused it to spread from ship to shore, and then to spread from person to person at Fort Barancas and the Naval Hospital, among patients already there with other complaints, and likewise among the attendants.—*Am. Jour. Med. Sciences.*

Cases Illustrative of Criminal Abortion. By HORATIO R. STORER, M. D., of Boston. (Read before the Boston Society for Medical Observation, Feb. 7, 1859.)

CASE I. Mrs. H——, of Roxbury, applied to me for treatment, on the 14th of October last. Patient, an American by birth, though the wife of a German, is a well formed, healthy looking woman, some twenty years of age, and was then five and a half months gone with her first child. Her general health had been good, and till the present she had never suffered from any form of neuralgic pain.

She reported excessive toothache, of nearly two months' standing; that it commenced on the left of the lower maxilla, but then affected both sides of both jaws; that during the whole period she had been under the charge of a physician, and had been thoroughly and actively treated, by anodynes, local and general, by antispasmodics, purgatives, fomentations, counter-irritants; that a tooth, apparently the only carious one she had, had been extracted ten days previously, and that it had been proposed to remove others, to which, however, she would not consent—all without the slightest relief.

She alleged, and showed, loss of sleep and of appetite, great general prostration, excessive despondency of mind. After the extraction of the tooth, abortion had threatened—and she now begged that it might be brought on; declaring, if refused, that she would induce it upon herself, rather than endure further pain.

She was ordered a fragment of pellitory root, pyrethrum, as a direct gingival stimulant, though horseradish would probably have answered the purpose, and on the second day presented herself cured. There has been no return of the malady, save a slight attack on January 19th, which was readily relieved by the same treatment. Patient was confined on February 3d; and is doing well.

I report this case for two reasons. In the first place, as an instance of the frequent success of simple and apparently trivial remedies after severe ones had failed. The affection seems to have been entirely neuralgic in its character, reflex, the result of the uterine irritation. All other causes mentioned by writers as liable to produce it were absent; there was no local inflammation, no general catarrhal affection; the disorder did not commence at, and apparently was in no way dependent upon, the carious tooth, at least it was not relieved by its removal, nor by the local blood-letting then occasioned.

I am aware that sialagogues, according to Gardien, and he is apparently indorsed by Churchill, are supposed indicated only in those instances where the toothache is in consequence of a general catarrhal affection, which did not here exist; but on the other hand their use would seem, on the simplest theoretical grounds, among the first procedures that would occur to the mind.

The second of the reasons referred to is the following: that I may express my strong disapproval of the practice, still extensively obtaining among physicians and dentists, of subjecting patients to

the risk of miscarriage, which must be confessed excessive, by the extraction of teeth during pregnancy. This procedure should in no instance be resorted to till every other measure which affords any prospect of relief has been faithfully employed. In the history reported, it is seen that such was not the case.

Extraction has been recommended by authorities who are respected, by Campbell, Gardien, Capuron, and others, on the supposition that there is a greater likelihood of abortion from the continued pain; but against this argument I place the facts that after resisting many remedies, the pain often disappears spontaneously—as is indeed allowed by one of the writers instanced, Capuron—and that in more plausible measures, tried and untried, readily occurring upon reflection to all who do not blindly follow the books, there is, I think, a greater probability of success. Anæsthesia, local and general, have both been found to avail. I would suggest, as worthy attention, a modification of the process of subcutaneous injection, proposed by Alexander Wood, of Edinburgh, and so successfully employed; merely here introducing the opiate beneath the mucous membrane, which I am not aware to have yet been done.* Should this also fail, a direct topical application, either of a local anæsthetic or a gentle stimulant, might be made to the cervix uteri; but as this latter procedure, though at times successful in the obstinate vomiting of pregnancy, cannot be used with too much caution during gestation, it would, therefore, be seldom justifiable; and only in the cases where the extraction of teeth in pregnant women can ever be defended, those, namely, where abortion is actually threatening and apparently at hand.

It might be asked how the case now reported can fairly and with justice be considered as in any way illustrative of the subject of criminal abortion, because, though menaced and solicited, this did not actually take place. It is an acknowledged principle of jurisprudence that a person must be presumed to intend all the natural, probable, and usual consequences of his own act.† Whenever, by any operative or other procedure, a physician directly produces abortion, unintentional though this may be, if in the absence of any precaution that might have been taken, he must be considered, to the extent evidenced by the history of the patient, responsible therefor; and the class of cases to which that now reported belongs, is accordingly open to as legitimate a question of obstetric morality and of criminal responsibility as that other series of late so ably discussed by Dr. Churchill, of Dublin.‡

* After this paper was in type, I find, by the *Edinburgh Medical Journal* for Nov., 1858, p. 424, that the above suggestion has been partially anticipated; a dentist, Dr Smith, having had recourse to the measure, for the painless extraction of teeth. The experiment does not yet seem to have been tried, however, as here proposed, with a view to prevent that operation.

† Davis, *Crim. Justice*, 483.

‡ *Dublin Quarterly Journal of Med. Science*, August and November, 1858.

CASE II. I was called to attend Mrs. S——, of Plympton Court, on the afternoon of January 2d, 1859, and found her flowing profusely, this having continued for many hours; the attack at first being considered menorrhagic, as she was still suckling, till an abundant escape of coagula had rendered probable its true character.

Upon examination, the uterus proved somewhat enlarged and slightly retroverted, the os, with difficulty reached, sufficiently patulous to admit the tip of a single finger, but its outline laterally and symmetrically fissured, so that the cervix presented to the touch an apparently deep and incised transverse wound completely through its substance, with irregular edges and indentations simulating artificial punctures. These irregularities and depressions were not like those presented by malignant disease; there was no fetor or other usual or plausible symptom of such, save the hemorrhage. Within the os a mass was felt presenting, which, from the absence of other signs of polypus, the sudden and profuse sanguineous discharge, and the faint uterine contractions that from time to time occurred, conjoined as these were with a contained body of hardly sufficient size, if a polypus, to have itself excited them, I did not hesitate to pronounce a partially detached ovum.

My first impression from the physical examination was of course that the abortion must have been owing to direct instrumental or other violence, which, however, the patient persistingly denied. Upon learning that she was of the Catholic faith, these suspicions were somewhat allayed; for reasons I shall elsewhere fully set forth, and which are borne out by statistics so far as existing, and by general experience.

I was the further convinced of my error upon hearing the past history of the case. The patient, as already remarked, was nursing—sixteen months having elapsed since her last confinement. The catamenia had not returned, and the only possible cause she had had for supposing she might be pregnant, beyond the ordinary exposure of married women, was an apparent slight decrease in the amount of milk secreted; of the existence of this decrease, however, she was by no means certain, and had attributed to it no importance. She had strained herself within a day or two, by reaching to a shelf.

Mrs. S—— had been confined four times; in every instance labor being exceedingly tedious, and delivery accomplished by instrumental aid. Though the children were all born living—one, however, the first, dying shortly after birth—their extraction was effected with much difficulty, and application of considerable force. I could not doubt, therefore, that the laceration of the cervix had occurred at one or more of the times referred to, sufficient to account for all the appearances that were now observed; an accident by no means incompatible with the exercise on those occasions of all needful caution and skill, for it is notorious that lesions, to a greater or less extent, of the margin of the os are extremely common, even in natural labors.

In the treatment of the present case there was nothing unusual. It seemed impossible to check the abortive process, and there being

little danger from confined internal hemorrhage in early miscarriage, when the uterine cavity is but slightly enlarged or dilatable, the vagina was plugged; strips of cotton being used, inserted separately and tightly packed, like the foil in the process of tooth-filling. Upon their removal, three hours after, the os was found widely patulous, proper forceps were introduced, and an embryo, some six weeks advanced, was removed; upon which the hemorrhage at once entirely ceased. The patient has made a good recovery.

January 28th, four weeks subsequent to the miscarriage, the physical signs presented by the uterus were still persistent, as described above.

Upon reviewing this case, I think it important to dwell upon the diagnostic peculiarities it presents, unadverted to, so far as I am aware, by any obstetric writer. We are all familiar with the various permanently disastrous results at times following instrumental or otherwise difficult labor, the adhesions, bands, and fistulæ that not unfrequently come under medical observation; but to find such, in the absence of all signs of concomitant or consequent malignant disease, and accompanied by profuse hemorrhage—their edges, the cicatrices themselves, and the depressions between them, obscured and filled by coagula, and at the same time, and in the midst of these physical anomalies, the presentation of an aborting ovum—would raise, I may surely say, in almost every mind the suspicion of foul and criminal interference. Were death to occur under such circumstances, the result at an inquest could hardly be doubted, unless unusual care were observed at the autopsy to remove by ablation all clots obscuring the age of the existing lesions; a precaution that in most instances would hardly be observed, for fear of disturbing any attachments of the ovum—so often in these cases preserved for the cabinet—that might still remain.

It is my duty to lay the more stress upon this case and its several suggestions, lest at other times, and in another connection,* any remarks of my own might seem unjust. But, on the other hand, I am thus strengthened in my belief that many of the medico-legal relations of criminal abortion are as yet uninvestigated or unfound, and that with every step towards their elucidation an advance is made towards the ultimate suppression of the crime.—*Med. Jour. of Med. Sciences.*

† DR. CHURCHILL ON CONSUMPTION.—As the medical world is now all agog in discussing the value of the *Hypophosphites* as a remedy in Phthisis, it may be interesting to know what are the views of Dr. Churchill in relation to the medicine as a therapeutic agent. Most persons have frequently heard of Dr. Churchill, though but few

* Essay on Criminal Abortion. North Am. Med.-Chir. Review, May, 1858.

† From *American Druggists' Circular*, March, 1850.

have heard *from* him. The following letter, which we get from the *Tribune*, was addressed to Mr. J. Winchester, of this city:

PARIS, Dec. 17, 1858.

MY DEAR SIR:—* * * * I very much regret my utter inability to send you a copy of my work on Phthisis. The whole edition was sold off in less than six months, and it has now been out of print since February last. * * * * I am now engaged upon a second edition, which has been delayed with the hope of my being able to settle the question of the existence or non existence, in the human economy, of phosphorous in an oxydizable condition. The chemical proof of its existence in such a state I now confidently hope I shall shortly be able to lay before the profession and the chemical world.

Your reply to Mr. Guilford's claim of priority is perfectly to the point. The same pretension has been raised here by two different parties, and also by one or two in England; but, in reality, the use of phosphoric acid, in Phthisis, dates as far back as 1789, when it was employed in Germany by J. B. Lentin. Since then, the phosphates, especially the phosphate of lime, have been used by many practitioners, and among others by Dr. Stone of New Orleans. That all the cases in which they are stated to have proved beneficial are to be rejected, or attributed to error of diagnosis, I am not at all prepared to assert; but think they are to be accounted for in one of the two following ways:

Any mode of treatment which is combined with *rest* and *improved diet* and living, may prove beneficial by stopping or diminishing the amount of waste of the oxydizable phosphorous. The phosphates may, therefore, have *occasionally* appeared to be of use, just as may have change of climate, homœopathy, or anything else.

Phosphoric acid, as shown by Weigel and King, and later by Della Judda, frequently contains **phosphorus* acid, an oxydizable compound, and as such could have, in accordance with my hypothesis, a *curative* effect, owing to its very impurity.

My views, with regard to Phthisis, may be summed up in very few words, and are as follows:

Phthisis is a diathesis or general disease, depending upon the want or undue waste of the oxydizable phosphorus normally existing in the animal economy. Hence it follows that the remedy consists in supplying the deficient element by the administration of *any preparation* of phosphorus which is at once assimilable and oxydizable. Now, phosphorus itself possesses the latter quality, and has occasionally been used with success; but it has not the first, and is so dangerous a substance, that it has fallen into complete disuse. Phosphoric acid is assimilable but not oxydizable.

The *Hypophosphites* combine both qualities in the highest degree, being perfectly soluble, and nearly as oxydizable as phosphorus itself; for which latter reason I originally preferred them to the *phosphites* which are less so.

As to the cause of Consumption, my hypothesis leads also to one or two other consequences of the highest importance in practice, viz: Although the hypophosphites are the specific remedy of the

diathesis, they can not cure, by *their own direct action*, the local diseases which the diathesis may have produced in the lungs or elsewhere, previous to the employment of the remedy. To expect the contrary would be just as reasonable as to think the water thrown upon a burning building can do the work of the mason or the carpenter.

The repair of such local disorder is brought about by the special energy of the parts affected, and will take place in all cases in which the destruction of the parts involved has not gone beyond a certain *extent*. The *degree* of the disease I hold to be of less moment than the *extent*, and incline to go so far as to look upon Phthisis in the third stage as of a more favorable prognosis than in the second, *all other circumstances being equal*. The prognosis of each individual case will, therefore, depend upon two points—the extent of the existing lesion, and upon the presence or absence of complication.

Another consequence, which is, if possible, of still greater importance than the cure of the disease, is the following:

If consumption depends upon the waste of the oxydizable phosphorus, it follows that the hypophosphites not only have a remedial but a preservative power. In fact, *they are a complete prophylactic*. Such, I am confident, will prove to be the case; and the time will come, I hope, when Phthisis and Tuberculosis, instead of occupying the first place in the cause of mortality, will, like small-pox at the present day, form a comparatively insignificant item.

My reason for this confidence is not derived from my assurance of the correctness of my general theory, but from the *invariable efficacy* with which I have found them act in all incipient cases, even of the acute kind commonly called galloping consumption.

I am anxious that all these assertions should be verified by the medical profession throughout the world. With them, and them only does it rest to establish or to deny their validity. Unfortunately, the past history of our art shows that every discovery in therapeutics has been met with a storm of prejudice and opposition such as finds no parallel except in the records of religious dissensions. I might have much to relate on that head in my own case, but prefer leaving such matters in the obscurity to which posterity is sure to consign them.

If, as you say, the people of the United States take an interest in my discovery, the only way in which I should wish them to show it would be by inducing the medical profession among you to give my treatment a *fair and complete* trial, which, I conceive, can only be done upon the following conditions:

1. That no case shall be considered to have any bearing at all upon the question at issue, unless it be expressly shown that all the conditions which I have laid down as necessary have been complied with.

2. That in each case not only the degree, but also the extent, of the tubercular deposit pre-existing to the treatment shall be recorded, together with the symptoms upon which this diagnosis is founded.

3. That the treatment used shall be the hypophosphites as I have

employed them. I do not consider myself in anywise responsible for the ill success of every crude formula which may be imagined by other practitioners.

As soon as my new edition is through the press, I shall have much pleasure in forwarding you a copy of it, meanwhile, I remain

Yours very obedient servant,

J. F. CHURCHILL,

17 Boulevard de la Madeleine.

J. WINCHESTER, Esq.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

A Treatise on Human Physiology, designed for the use of Students and Practitioners of Medicine. By JNO. C. DALTON, Jr., M.D., Professor of Physiology and Microscopic Anatomy in the College of Physicians and Surgeons, New York; Member of the New York Academy of Medicine, etc., etc. With two hundred and fifty-four Illustrations. Philadelphia: Blanchard & Lea, 1859. pp. 608.

On the objects of the Author in this work, we have the following:

“This volume is offered to the medical profession of the United States as a text-book for students, and also as a means of communicating, in a condensed form, such new facts and ideas in Physiology as have marked the progress of the science within a recent period. Many of these topics are of great practical importance to the medical man, as influencing, in various ways, his views on pathology and therapeutics; and they are all of interest for the physician who desires to keep pace with the annual advance of his profession, as indicating the present position and extent of one of the most progressive of the departments of medicine.”

He states that he has also given the experimental basis upon which the conclusions of physiologists are founded.

The illustrations have been got up mostly by the author. Of the

two hundred and fifty-four, only eleven have been borrowed from other writers.

Physiology appears to be progressive ; and it seems necessary to have once in a while a new book for recording observations and discoveries. When the *vital force* was alone invoked in explanation of the processes going on in the body, a volume would last for a generation. But *tempora mutantur et nos mutamur in illis*. We have found out at last, that although we must recognize still the presence of this force, we can really explain by it nothing. We attribute to it very much—explain by it nothing.

Made up of some fifteen chemical, and eighty-five organic elements, the human body presents in the methods by which it appropriates substances to its purposes, and in the methods by which it discharges what is of no use to it, a series of movements, that we, in these latter days, have found amenable, to a very considerable extent, to the explanations of the chemist. *Physiological Chemistry*, therefore, has come to be recognized as a “department,” and prolific, we find it to be, of the most valuable suggestions to practical medicine. The microscope unravels before our eyes the structure, minute as it may be, of the tissues ; chemistry investigates the atomic elements in the normal and abnormal states ; and when they are entirely “worn out,” marks the modes by which they become compounded before being discharged from the body. As a consequence, works now on physiology have but little to say about “vital dynamics”—much about animal chemistry.

The diagrams by the author look refreshing, and show originality of thought and mechanical ingenuity. Considering how often the old diagrams have been reproduced, every new author compelling us to look upon the face of an antiquated acquaintance, we must give the author credit for, to say the least of it, administering to our taste for novelty. But this is not all. He has shown that we had not “culminated” on diagrams.

Of the many before us, we recognize, on page 349, one of spinal chord in vertical section, showing *reflex action*. The mechanical execution of this is very beautiful, and when the trouble of making *reflex action* understood is thought of, teachers will see the utility of this diagram.

We have no space, nor is it necessary, to pass in review matter that is the same in all works on physiology. We will notice, there-

fore, a few subjects that are yet in the "doctrinal" stage—unsettled. Among these we recognize *Animal Heat*.

The theory proposed by Lavoisier, and with some modification supported by Leibig, viz: that the oxygen taken into the lungs unites immediately with the carbon of venous blood, thus giving rise to carbonic acid at once set free under that form to the atmosphere, the same quantity of heat resulting from the process as would have been produced by the oxydation of a similar quantity of carbon in wood or coal, is really in the estimation of the author not tenable. It being ascertained that the carbonic acid is not formed in the lungs, but exists in the blood before its arrival in the pulmonary capillaries, and that the oxygen of inspired air, does not combine with carbon in the lungs, but is absorbed by the blood globules and carried away by the current of the general circulation, Leibig proposed to have the oxidation in the capillaries of the tissues and organs in the various parts of the body.

In the following, the author has condensed in a very chaste manner, his views on the subject:

"Animal heat, then, is a phenomenon which results from the simultaneous activity of many different processes taking place in many different organs, and dependent, undoubtedly, on different chemical changes in each one. The introduction of oxygen and the exhalation of carbonic acid have no direct communication with each other, but are only the beginning and end of a long series of continuous changes, in which all the tissues of the body successively take a part. Their relation is precisely that which exists between the food introduced through the stomach and the urinary ingredients eliminated by the kidneys. The tissues require for their nutrition a constant supply of solid and liquid food, which is introduced through the stomach, and of oxygen, which is introduced through the lungs. The disintegration and decomposition of the tissues give rise, on the one hand, to urea, uric acid, which are discharged with the urine, and to carbonic acid which is exhaled by the lungs. But the oxygen is not directly converted into carbonic acid, any more than the food is directly converted into urea and the urates.

"Animal heat is not to be regarded, therefore, as a combusive process. There is no reason for believing that the greater part of the food is 'burned' in the circulation."

As is usual with works of the kind before us, the question of 'spontaneous generation' of infusorial animalcules is descussed.

The experiment of Schultze, by which atmosphere, in getting into the bottle containing the infusion of organic matter was made to pass through sulphuric acid and a solution of caustic potash, the author thinks settles the matter against spontaneous generation, and in favor of the presence of germs. These germs, it is supposed, are supplied by the atmosphere. Being microscopic, they, of course, escape ordinary observation.

We see no reason why this question should have excited so much interest. It is, after all, a mere question of method. For all that we can see, the power to get up natural laws, the operation of which results in the formation of animals, differs in no respect from that of direct creation. Nor do we suppose that one view more than the other, would be calculated to enhance the veneration with which all sensible men contemplate the Architect of the Universe.

Among the things that may be regarded as "differential" on the part of the author are his views with reference to *red blood corpuscles*.

"In structure, the blood corpuscles are homogeneous. They have sometimes been erroneously described as consisting of a closed vesicle or cell wall, containing in its cavity some fluid or semi-fluid substance of a different character from that composing the wall of the vesicle itself. No such structure, however, is really to be seen in them. Each blood globule consists of a mass of organized animal substance perfectly or nearly homogeneous in appearance, and of the same color, composition and consistency throughout. In some of the lower animals, (birds, reptiles, fish,) it contains also a granular nucleus imbedded in the substance of the globule; but in no instance is there any distinction to be made out between an external cell wall and an internal cavity."

We know of no mode by which this question, "cavity or no cavity" of red-blood corpuscles can be settled. The weight of testimony is against the author. Besides we regard his explanation of what has been regarded as a veritable endosmoses as unsatisfactory. Water added to blood swells up the corpuscles so much that they become spherical and burst. So will any of the animal fluids possessing less density than blood.

There is an omission in this work of anything in relation to the physiology of the *special* senses. This detracts from the value of the work, very materially, to students. Nothing can be more interesting to the student than the eye and ear, and as the pathology of these organs are now exciting a great deal of attention, the

physiology as a basis for this is indispensable. We hope the author, as soon as a new edition of this work is called for will supply, what we can regard in no less light, than an omission.

As it regards the style of the author, we may remark there can be but one opinion. It is a good while since we have had the pleasure of inspecting one of an American author, so pure. The best of words are used in the descriptions and seldom one that is redundant. As a consequence we have terseness and perspicuity. Nor can any one be at a loss to understand the position of the author on subjects admitting of diversity of opinions.

In conclusion, we bespeak for this work a perusal by our readers, and we predict for it a number-one position among works of the kind.

An Essay on the Pathology and Therapeutics of Scarlet Fever.—

By CASPAR MORRIS, M. D., Fellow of the College of Physicians of Philadelphia, late Lecturer in the practice of Medicine in the Philadelphia Medical Institute. Philadelphia: Lindsay & Blakiston, 1858.

This monograph has been on our table for some time. The original edition having become exhausted, the publishers have requested liberty to issue a second. The author tells us that the views expressed are the result of thirty years' observation in various public institutions and private practice. We copy the following on the period of life and age most subject to the disease :

“ Though it be true that scarlet fever is in an especial degree a disease of infancy and childhood, all ages are, to a certain extent, liable to it. I some years since attended the family of an officer of the highest rank in the U. S. Navy, in which every member was ill simultaneously with the most malignant form of the disease, including his wife who was then fifty years old, and died of the disease, a son who was more than twenty-five years old, the servants and nurses, all of course beyond childhood. Parents and nurses often take the disease from children. The reports of the Registrar General of Great Britain are exceedingly interesting from the extensive field of observation they cover, and furnish us with the most important information on this and similar points. Thus, with regard to that which now claims our notice, we find that during the months of January and February, 1840, there were 345 deaths from the disease

in London. Of this number 326 were under thirteen years of age, and 19 only were adults. And of 2614 deaths included in his fourth report for the kingdom, 2429 were children, 182 adults, and 13 aged persons. Of 21,304 deaths by scarlet fever in England and Wales, there were under 1 year, 1291; 1 year old, 3102; 2 years, 3705; 3 years, 3386; 4 years, 2677; from 5 to 10, 5400; 10 to 15, 1056; 15 to 20, 268; 20 to 30, 228; 30 to 40, 130; 40 to 50, 56; thus proving that the period of greatest susceptibility is from 5 to 10 years.* This proportion is even greater than appears on the face of the table, since we must take into our calculation the consideration of the large number of children who have died of other diseases before they reached the fifth year. Infants under one year are less liable than those who are older, as is proven by the statement just presented. Now, when we take into view the commonly conceded fact that the proportionate mortality of adults is much greater than of children, the real difference in liability will be found to exceed that which appears to be represented by these numbers, great as this is. This able and interesting digest of the mortality of Philadelphia prepared by Dr. Wilson Jewell, exhibits a similar result. That for instance for second quarter of 1857, exhibits as the total mortality from scarlet fever 153 cases, of which one only was an adult between 40 and 50 years old; 1 between 15 and 20; 36 between 5 and 10; 66 between 2 and 5; 31 between 1 and 2; and 11 only under 1 year. As regards sex, there were 72 males and 81 females. Since the publication of the first edition, I have met with an interesting case of a lady with an infant two months old. She had a severe attack of anginose scarlet fever, with great cerebral disturbance. The disease was fully developed when I was first called to the case. The secretion of milk was very abundant, and unchecked by the disease. The infant had been exposed equally with the mother to the cause of the disease, and also to the contagion of the mother, having been nursed during the night, and was laid in the crib by her side. The danger to it could not therefore be increased, while the influence upon the mother of the interruption of lactation would be very pernicious. I therefore directed that the child should be kept at the breast, which was done with entire impunity. The secretion of milk was never suspended, and the mother recovered. The infant escaped then, but had scarlet fever some years subsequently. That persons at the other extreme of life may suffer from it I know, having seen it prove fatal in several patients not less than fifty years old."

* See Dr. Tripe, in *London Medico-Chirurgical Review*.

The following relates to a matter very frequently disussed by medical men :

“Before we dismiss finally the consideration of the nature and laws of the specific cause of the disease, it is proper to draw attention to the well established fact, that it is one of those to which we are liable but once. Dr. Willan, whose opportunities for observation, were unusually great, and whose authority is beyond question, says that in more than two thousand cases which passed under his notice, he never met with a second attack. Dr. Tweedie asserts that there are well authenticated instances, but does not speak of them as of his own knowledge. No instance of a second attack occurred to Dr. Chapman, in his large and long extended observation. Dr. Currie, of Liverpool was compelled by long experience to ‘renounce the opinion he had early entertained, and to confess that the same individual is liable to the disease once only.’ Sir Gilbert Blane, on the other hand, asserts that he met with one instance of scarlet fever occurring thrice ‘without the least suspicion of ambiguity.’ Analogy favours the idea that in this, as in all other diseases, there are such exceptional cases. At an early period of my professional course, I thought I had met with them frequently myself. Longer and more careful observation has convinced me that, in many instances, I had mistaken other diseases for scarlet fever, misled by the similarity of the eruptions. There is a form of eruptive fever caused by indigestion, closely resembling this disease in its appearance, and like it making its invasion very suddenly, which is often met with in childhood. Such cases have undoubtedly been mistaken for scarlet fever, and have given rise to some of the reputed instances of second and third attacks. When occurring in the case of a child with enlarged tonsils, which are liable to acute inflammation from cold, or disordered stomach, the resemblance to scarlet fever is very close. Such cases run a shorter course, are not attended by delirium, nor is there the free secretion of acrid mucus discharging from the nares. The pulse is not so frequent, nor is the prostration so great. They are not followed by desquamation or anasarca.

“Secondary attacks may, however, occur, though less frequently in this than some of the other exanthematous fevers. A medical friend of great eminence has informed me that he lost a member of his own family by a second attack. The first was, when the child was but four years old, was irregular in its character, the eruption imperfect, and not followed by desquamation. There was an abscess

in the neck, and long continued ill-health succeeded. After an interval of five years, the second and fatal attack supervened. There was but little affection of the throat, but the rash was very vivid and extensive, and death occurred from exhaustion of the vital forces by the intensity of the febrile reaction. The absence of desquamation after the first, and the occurrence of the second, induce me to believe that the first was of the same nature as those above referred to. Another medical friend has assured me that a well-marked second attack occurred in his family."

A treatise on the Venereal Diseases. By JOHN HUNTER, F. R. S., with copious additions by PHILIP RICORD, translated and edited with notes, by FREEMAN J. BUMSTEAD, M. D., second edition, revised, containing a resume of RICORD's recent lectures on Chancre, &c. Philadelphia: Blanchard & Lea.

The doctrines of Hunter and Ricord on the subject of venereal disease, are well known to our readers. The original works of these great men have been so long before the profession, that they are already familiar as household words. We feel warranted in saying that very few books, in the history of surgical literature, have had such deeply laid and solid foundations, in the personal observations and clinical experience of their authorship, as the one before us. The best labors of the great modern surgeon, John Hunter, were bestowed upon this subject. His observations, as recorded in this book, constitute the great substratum on which the various doctrines connected with venereal disease, as understood in modern times, rest. These, corrected, extended and perfected, by various modern observers, find their culmination in the zeal, perseverance, exclusive devotion, acumen, and extended means of observation, of Ricord. The combined observations of the two, blended in a single volume of 550 pages, octavo, constitute the alpha and omega of this subject, as belonging to modern times, and a monument to their memory, which, of itself, is sufficient to render their names imperishable.

The additions made by the editor are slight, but creditable as to character. Such of our readers as are ambitious of having anything approaching a good library will not fail to secure it.

A Practical Treatise on Diseases of Children. By D. FRANCIS CONDIE, M. D., Fellow of the College of Physicians, &c. Fifth edition, revised and enlarged. Philadelphia: Blanchard & Lee.

This treatise has so long been in the hands of American practitioners, and is so generally recognized as a standard work, that any thing beyond the mention of the present edition, is superfluous. The well known reputation of the author, and the former editions of the book, are a sufficient guaranty as to the character of the additions. We suppose that there are but few who assume the difficulties and encounter the embarrassments and uncertainties of infantile practice, without seeking aid from its pages. H.

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

The Prevalence of Insanity.

We notice by the Reports of our Asylums for the Insane that, although we have attempted to make provisions for this unfortunate class of our population, this is yet by no means ample. In Massachusetts, where the census of the insane and idiotic has been taken with some care, it seems that, in 1854, there was one in every 437 of the population. This proportion is greater than we find in most other countries. In France, it is one in every 795; in Norway, one in every 551; In the Rhenish Provinces, one in 666; England and Wales, one idiot or insane in 577; in Scotland, in 1851, one in 390.

We have no means of comparing the present extent of insanity with its prevalence among the same races for any length of past time. Indeed the duty, it seems, has just been assumed of collecting statistics. It would be very desirable to know the extent of the disease among the ancient Egyptians, Greeks and Romans; or what it is now in China, Arabia or India. Nor have we any means of getting at the proportion of those who lose their reason among the barbarous and demi-civilized.

Of one thing, however, we may be very certain. We have a very large amount of the trouble in our country, and the annual reports of Superintendents indicate that it increases, *pari passu*, as we develop our type of civilization. If one in every 427 of our population are inevitably doomed to lunacy, as appears to be the case in Massachusetts, the suggestions, it might be supposed, of humanity, if properly consulted, would point out the propriety of thoroughly investigating everything in regard to our institutions, habits, etc., that might be suspected of having the relation of cause to the complaint.

The cause of the disease we are aware, is a very broad field, and one that has been industriously cultivated. We shall, therefore, only trouble the reader with a very few thoughts on the present method of educating children, in order to see if the nervous system is properly cared for at the period when it is most easily injured.

At a very early age our children are sent to school ; and it is very common for parents to commit them entirely to the care of the teachers, not inquiring at all into the amount or character of the matter they are required to learn. They are taken charge of, and among the first lessons they receive is one addressed to their ambition, and designed to call forth the utmost stretch of the intellectual faculties; and such lessons are repeated, and daily attainments on the part of the child required at the peril of being "dismissed," "degraded" or "disgraced." The exercises, too, are carried on under very unfavorable circumstances. The period of daily confinement varies but little from six hours ; and it should be recollected that the rules of the school-room are designed to repress all physical or spontaneous motions during school hours ; and that the lungs have to be filled with an impure atmosphere during six out of the twenty-four hours.

Is a system of education such as this, founded upon correct views of physiology ? Is it proper, by either hopes or fears, to goad the brain of the child into such artificial activity, continued, too, for such a length of time ? Neither Pope, Sir Walter Scott, nor Locke, could labor when in the best health, more than five or six hours daily. If, therefore, men with brains fully developed and hardened by constant exercise, are unable to exceed six hours' daily toil, what propriety is there in forcing children to apply themselves for such a period, or longer ?

The impression has had currency for some time, that such a course often begets distaste in after life for intellectual pursuits ; and we have abundant evidence that it is inimical to the free energy and

strength of the original thinker. Moreover, is it not very probable, that we may look into our school system with great confidence for the causes of the alarming prevalence among us of insanity? May we not here detect the early rupturing of these delicate brain cells, and sundering of those highly attenuated nerve fibres, which predispose in after life, from the slight presence of exciting causes, to mental aberration?

There is not much known in regard to the frequency of insanity among nations that are uncultivated. Travelers tell us that there is but little of the disease on the southern shores of the Mediterranean, as in Egypt and Syria; and still less common is it in Arabia, and in the parts of Africa known as Negroland. Such facts lend reasonableness to the presumption that the disease is connected intimately with our system of mental culture.

We have, as we have intimated, an ignoring of not only the plainest principles of hygiene, in even the best conducted schools, but the child treated without reference to those physical laws upon which its health in future life depends. It is confined at intellectual pursuits for a greater period daily than can be endured by an adult.

Parents and teachers should look into this matter, for we have no doubt, that sooner or later, here will be recognised a very fertile source of mental disease.

The remark is often made, that moral causes, more frequently than physical, determine insanity. This is the opinion, after very extensive statistical inquiry, of Parchappe; and much of our insanity is accounted for by the variety and intensity of the moral emotions incident to our form of sociology. This makes it necessary to watch over the amount of labor to which the nervous system is subjected in early life; and all other circumstances calculated to interfere, in any way, with its integrity. For any thing that is known to the contrary, the *moral*, just as well as the intellectual faculties, have their seat in the brain. What, therefore, destroys a cell or fibre with which intellectual phenomena are connected, may also be expected to affect, in some injurious manner, the moral faculties.

CHICAGO MEDICAL JOURNAL AND ETHNOLOGY.—Drs. Davis and Byford have retired from the editorial charge of this excellent journal. The name of Dr. Brainard, Professor of Surgery in Rush

Medical College, now appears on the cover as editor. To the present editor therefore we extend the right hand of fellowship, and wish for him a full share of all the rewards the future is likely to contain for medical editors. .

We are not in the habit of calling in question the views of our confrères. But Dr. B., in his notice of Flouren's course of Comparative Physiology, given at the Museum of Natural History, Paris, 1856, makes some ethnological statements, in regard to which we propose to ask a question or two.

The unity of origin of the races of mankind, Dr. B. says, Flouren's has completely established. It, as we understand, is claimed as an inference from the following propositions :

1. "What is the characteristic of each species of animal ? It is the *power of perpetual reproduction*.

2. "There is no evidence that any species of animal has ever changed its essential characters of form or habit. While the individuals and the elements of each are always changing, the form is perpetual. M. Flourens asserts, and no one is more competent to decide, that from the earliest historic period to the present, there is no evidence that a single species of animal has ever changed its essential characteristic."

3. "It is the character of hybrids or mongrels to become extinct at the fourth generation."

How does the above definition of "species" favor the doctrine of unity of origin of the races ? If all the races are of the same species, what is the reason that the Caucasian and Negro have not the power to mix and produce a permanent offspring—an offspring capable of perpetual reproduction ?

Again, if it is true that the essential characters of animals never change, would not this favor the theory of *diversity of origin* ? Indeed this is the principal of all the arguments the diversitarians use. If it is true that the negro has not been made a negro by climate, habits, food, or any thing else with which we are acquainted ; the plain inference to which the mind of every one arrives, is, that he was created a negro. If time has had no effect, within the historic period, on the physical characters of the different races, is it not right to infer that these characters have always been what they now are ?

MEDICAL NEWS, LOUISVILLE, KY.—Certainly we “Exchange,” certainly we will, and glad of the opportunity. We like Louisville too well, to even appear tardy in reciprocities. We had supposed, until we looked, that the “Medical News” was on our exchange list. Well, it is *now*; and we embrace the opportunity of wishing for it a wide circulation. The numbers we have received are filled with good matter, well dished up.

AMERICAN MEDICAL ASSOCIATION—CONVENTION OF COLLEGE PROFESSORS AT LOUISVILLE, KY.—Before this number reaches our most distant subscribers, we will have another national *re-union* of medical men at Louisville, Ky.

The great and leading object of these meetings being to elevate the standard of medical education—to make medical men more learned and thorough, we have been amused with the opinions expressed by the journals on the practicability of the measure. As a rule, those journals closely connected with the colleges, have rather been inclined all the time to pour cold water on the efforts of the Association. They think the colleges, and not the profession, have rightly in charge the subject of medical education. They, the colleges, it is suggested, have been chartered and endowed for that very purpose. They know all about the subject, and from year to year introduce all the improvements practicable. On the other hand, the journals having no such connection, are clamorous that the Association take charge of the whole subject of medical education, prescribing not only the rules and regulations by which degrees shall be conferred, but taking away entirely from colleges, the right to confer them, placing this power in an independent board got up for the purpose.

Last year the committee on “Medical Education” offered a resolution providing for a convention of college professors, to meet at Louisville, on Monday, 2d of May, to take the whole matter into consideration. Of what account one day’s work will be on such a subject, we are unable to see.

We are not authorized to speak for, either the colleges, of which there are now about 42, or for the laymen who operate mostly

through the Association. But we can see no impropriety in regarding all parties as aiming at the same thing. Every one, indeed, who has the feelings of a medical man, wishes and desires to see our system of education perfected. And while the colleges, we would suppose, would be willing to receive useful suggestions from any quarter whatever, they will likely be for claiming, as long as they have the interesting responsibility imposed upon them of keeping life in their respective enterprises, some little independence of judgment. It is reasonable that they should be a little *indisposed* to having no hand whatever in the process of hatching their own chickens.

DEATH OF PROF. ACKLEY.—We are pained to have to announce the death of this distinguished surgeon, which took place on the 24th ult., at his residence in Cleveland. He was in the fiftieth year of his age.

Prof. A. was a self-made man. At an early period of his professional career, he made himself a fine anatomist, which led him into the department of surgery. He filled the chair of surgery for a number of years in Cleveland Medical College. As a surgeon, he was distinguished for the strength of his judgment, and the facility and success with which he operated.

This is another lesson, seemingly near at home, reminding us of the unerring certainty of the old maxim—*mors omnibus communis*.

MUSEUM OF STARLING MEDICAL COLLEGE.—The room of the building designed for museum purposes is now completely finished, and is being rapidly filled up with material pertaining to medicine and the natural sciences. In addition to what we have had on hand for some time in the way of facilities for illustration, orders have been sent to Europe for more, embracing chemical apparatus, paintings, and models, with which to illustrate all the departments. Besides, the order embraces a pretty large number of osteological preparations, not only pertaining to the human body but to all the principal types of vertebrated animals.

Before, therefore, our winter session opens we hope to be able to present a museum containing as useful a collection of things as can be found in the country anywhere—a collection upon which the physician, no less than the student will delight to look.

By the way, we might, just as well as not, mention the fact, that our college building, which in some parts, heretofore presented an unfinished appearance, is rapidly approaching completion. The workmen will have every part in complete order by the 1st of July.

To the alumni and friends of the Institution, what we have said will no doubt be regarded as good news.

A tribe of aborigines have, it is said, lately been found in Australia presenting the peculiarity of being without hair on any part of their bodies at any period of life.

TO SUBSCRIBERS.—One more number closes the 11th volume of the Journal. Very many are in arrears, not only for the present volume but for back volumes. We hope therefore to have a general “*hearing-from*” time with all who owe us anything, before our next number goes to press.

Receipts will appear in July No.

AGENTS WANTED.—Will each subscriber who has been owing us for years, turn himself at once into an agent, collect of himself what is coming to us and transmit it to our address in this city? We want a number of agents if our terms suit.

SURGICAL CASES, *illustrative of points connected with injury of nervous trunks.*

The first two we give as illustrating the tenacity with which vitality is retained by nervous trunks.

CASE 1. Miss M. appeared at the surgical clinic of Starling Medical College on Saturday, Feb. 6, 1859, for the removal of a tumor, situated on the humerus, extending from the lower margin of the

tendon of the pectoralis major, to the flexure of the fore-arm, and encircling more than two-thirds of the circumference of the arm. As she did not arrive till we had made engagements with other cases which claimed the clinic hours, all interference was deferred, and an engagement made to remove the mass at the clinic for Saturday, Feb. 13. At this time the class was informed that we supposed that we had to do with a fatty tumor. A wide depression was formed on the mass by the forcible contraction of the biceps, showing conclusively that it was beneath that muscle. Attention was fixed upon the evident relation of the disease to the whole length of the humeral artery, and the median and other nerves.

Operation. We made an incision upon the inner margin of the biceps: having thus exposed it freely we proposed to bisect it, or not, as seemed to be demanded by circumstances. It was, however, unnecessary. The arm being flexed, its inner, inferior and outer margins were separated with great facility, with but little aid from the knife. At its superior margin, however, its connections being very powerful, were separated only by the knife. Observing carefully the course of the large blood vessels and nerves, all these, except the median and internal cutaneous nerves, were found to pass beneath the tumor. These entered it above, and the former was already recognized as emerging from it below. To effect the separation of them was the only nice point in the operation. It was readily and perfectly effected, so far as the median was concerned, but as we advanced downward in the separation of the internal cutaneous, we mistook it for a fold of cellular tissue, and accordingly a section, a little more than an inch in length, was removed. The operation being completed, the whole chasm was traversed by the median, as cleanly dissected as we were capable of doing it, which was even considerably removed from even the nearest wall of the chasm which it traversed. Hemorrhage being arrested, these were carefully approximated, by adhesive strips, compress, bandage, &c., and the patient carefully put to bed, without a pulse in the radial artery, however.

Feb. 14th. Arm still pulseless—temperature much reduced.

15th. Still there is no pulsation at the wrist, or at any point below the tumor. No cause for it, in the character of the dressings; nor has there been at any time.

16th. There is barely perceptible pulsation in the radial: increase of temperature quite obvious.

17th. Normal temperature of arm restored—pulse gaining some strength and volume.

From this time there was gradual improvement. There was some complaint of numbness in the integument, covering the ulnar border of the fore-arm, and occasional "tingles" along the course of the median, but neither was serious in character. The wound healed satisfactorily.

We heard from this patient eight weeks after the operation, and were gratified to learn that sensation and motion were already quite perfectly restored in all the parts supplied by the median.

CASE 2. We assumed the care of Mrs. L., of Prairie township, Franklin county, Dec. 12, 1857. She is the mother of a large family, is aged 62, but presents the characteristics appropriate to 75. Has had small but persistent ulcers on the right leg, for the greater part of the last fifteen years. They have not troubled her for several months.

At our first visit, we found a deep excavation, formed, as we supposed, by the sloughing of a carbuncle, large enough to admit a large fist, situated so as to expose four inches of the sciatic nerve as it emerges from the pelvis, and the parts attached to the tuberosity of the ischium. From this excavation, a sinus passed down the thigh along the course of the biceps muscle, and had an opening through the integuments, on the tendon of the biceps, opposite the middle of the popliteal space. Another sinus extended upwards from the large excavation, crossed the posterior aspect of the sacrum, passed into the gluteal mass of the opposite side, and became subcutaneous, just below the crest of the illeum.

To us, a most important feature of the case was in the mode of implication of the sciatic. It did not pass through the chasm without touching the walls, but was in contact with its deeper one, being dissected out in its other aspects as perfectly as could possibly be done by the scalpel. Still sensation and motion, so far as they were dependent upon the nerve, were not perceptibly impaired.

The surface of the sore presented a singular absence of sloughs, granulations and sensibility.

For four weeks, no means were found successful in effecting a perceptible alteration in its character, so that during the whole of that time, two-thirds of the circumference of this large nervous trunk was only protected by the imperfect pus that exuded from the surface, and our dressings. A most rigorous use of general stimulants and tonics, with the local use of pressure, effected by adhesive

straps, the bandage, compress, &c., succeeded, eventually, in studing the surface with a crop of fair granulations. These could only be sustained by the vigorous and varied use of the same local and general appliances. The undue continuation of any given stimulant or tonic, or combination of stimulants or tonics, was followed with a weak condition of the surface, most promptly and certainly. Domestic beer, ale, hard cider, wine, rye whisky, brandy, the mineral acids, quinine, chalybeates, and bitter tonics were brought into requisition. When vigorously used, and frequently varied in their combinations, they imparted laudable characters to the pus, and color and sensibility to the granulations, with the utmost certainty. But the absence of a distinct impression from them upon the general system, was followed with almost unfailing certainty by suspended action. Such a course of perseverance as we have rarely been called upon to exercise, was finally successful in closing the sinuses, and filling and cicatrizing the open ulcer.

The patient has recovered. Of course so extensive a gluing together of important parts as is implied in the closure of so extensive a sore, is attended with some inconvenience to motion. So far as we are able to ascertain, however, we are of the opinion that the nerve has sustained no injury except what results from the contraction of the cicatrix, and this is moderate.

In the first of these cases, we have 7 or 8 inches of a large nervous trunk deprived of its connection with the vascular system, except so far as it is effected through the vasa nervorum, maintaining its vitality, till by the deposition of lymph, and the formation of new vessels, it is supplied by them. In the second case we have a large nervous trunk laid bare in about two thirds of its circumference, for four inches, and kept in that condition for a number of weeks, retaining its vitality, however, and eventually recovering its function perfectly.

CASE III. An Irish dining-room servant, in an encounter with a fellow servant, received a punctured wound in the flexor muscles of the fore-arm, with a broad dull carving knife, which evidently injured, though it did not divide the median nerve. Appeared at the surgical clinic of Starling Medical College, on Saturday, Jan. 31. Complained of some numbness and tingling in the situation of the distribution of its trunk. The wound was treated as an incised wound, and very soon closed.

CASE IV. A man entered the Ohio Penitentiary about the first

of January last, who had recently suffered from a sloughy abscess on the lower part of the radial side of the fore-arm, the cicatrix left by which was dense and very much puckered. It was attended with slight impairment of both motion and sensation, with tinglings from slight causes. He soon afterwards was presented at the hospital clinic.

The interesting practical fact in these cases, is, that in both of them, the ordinary use of the hands, in the first case in the trifling work of a dining-room, and in the last, an irregular, but trifling service, was sufficient to produce vesication, not of the hand generally, but on parts of it indicated by the points of distribution of the branches of the median nerve, in the first case, and of the radial in the second. The vesications in the latter case were disposed on the thumb, the radial border of the index finger, and the adjoining borders of the index and middle fingers, with all the particularity of an anatomical description.

These trifling cases are abundantly instructive. The nervous influence being impaired, parts so situated, have diminished power to resist and prevent morbid results, from the application of external injury. The same thing is occasionally exemplified in paralysis. Applying a blister to a paralyzed part, quite probably it does not produce simple vesication, but sloughing. A patient with hemiplegia becomes bed-ridden. The dorsal decubitus, with equal pressure on the two symmetrical halves of the body, is maintained. On the sound side no injury results; on the injured side, there are extensive sloughs. Injury of the spinal cord, in certain situations, produce paralysis, or impairment of nervous supply to the bladder. It eventually becomes inflamed. Ligation of the axillary plexus in animals, or exsection of portions of important nerves in man, is not unfrequently attended with inflammation and mortification of the parts beyond. Division of the fifth nerve about the ponsvarolii of rabbits, is followed by a superficial inflammation of the eye, and opacity of the upper segment of the cornea. Division of the nerve on the petrous portion of the temporal bone, so as to destroy the casserian ganglion, is followed by general ophthalmitis, sloughing of the cornea, and destruction of the organ.

Case of Purpura Hemorrhagica. By THADDEUS ASBURY REAMY, M.D., Hopewell, O. Read before the Hebron Medical Society.

Jasper Shaw, aged seven years, was brought to my office by his father, on the morning of 16th of March last. I was requested to prescribe for "a sore mouth and bleeding gums," from which, I was informed, he had been suffering for several days. On examination, found entire mucous membrane of mouth and gums of very pale color, and small quantities of blood oozing out around the teeth. Pulse very frequent and feeble, having scarcely any force; countenance pale.

I inquired if there were any spots on his legs; was assured there were none. I remarked to the father, that in this he was probably mistaken, which opinion proved correct. Exposing the parts revealed two or three large, dark, echymosed spots on each of the lower extremities, situate on the anterior aspect, about midway between knee and ankle. Petechia in great abundance on both upper and lower extremities. There had been no epistaxis. I informed the father, however, that this latter difficulty would, in all probability, be added soon.

The lad had bright, penetrating, blue eyes, light hair, rather delicate physical organization; stood very erect, moved quickly, and answered questions very intelligently.

The father stated that the boy had never in his life been sick; had always been remarkable for his activity. Intellectually, as compared with his brothers, (of whom he had several), was decidedly in advance of his years. I recognized the case as one of Purpura. This was clear. But the causes producing it, a knowledge of which was of paramount importance, to a knowledge of the disease itself, in guiding to a correct course of treatment, was by no means so plain.

It could not be for want of wholesome, nourishing diet; for the father was a farmer, who lived well, and their food was of the most completely mixed character, such as would be considered, so far as the influence of diet would affect, to protect against such an attack. It could not be bad air, peculiar to their immediate location; for theirs is a very healthy country residence; and the little fellow was much accustomed to active out-door exercise. It could not be bad water, for there was a spring of very pure water near the door of their dwelling. Neither could there be hereditary taint; the parents were both quite healthy, and no such disease had ever affected any of the relatives.

In reflecting as to the etiology of this case, I was forcibly impressed with the similarity of symptoms, and constitutional resemblances between it and the more grave cases of diphtheritis, that occurred during the epidemic of this latter disease, that prevailed in this vicinity during last year, an account of which was presented to this society at its last session, and published in the *Ohio Medical & Surgical Journal* for January, '59. Indeed, with the exception of the pellicular membrane, and the difficulty in breathing, dependent upon the obstruction of the air passages, the symptoms were almost identical. And I now remembered to have seen a fatal case of Purpura, two years since, occurring in a young man of constitutional temperament, very similar to this boy. Every case of diphtheritis that proved fatal, in my own practice, occurred in children of delicate, nervous temperament. And I am well convinced, that in the cases that recovered, other things being equal, the disease was uniformly more grave when the subject was of this type.

My conclusions were, that the two diseases were superinduced by the same cause. Perhaps, some peculiar atmospheric condition, acting upon constitutions already prepared by their delicate organization, for the destructive influence of the morbid agent, producing disorganization of the blood, &c.

Holding these opinions, I made the following prescription: Quin. Sulph.—grij every four hours, lemon juice to be used freely. Tr. myrrh applied to the bleeding gums.

On the following day, at 4 o'clock, p. m., was summoned in great haste to see my patient. Had been bleeding from both nostrils some five hours. Pulse very frequent and feeble, countenance pale; patechia had extended to the trunk in great abundance; echymosis darker; gums in somewhat better condition, no bleeding from them. Testing the urine, I found it to be excessively alkaline.

Pres. quin. sulph. gr. V, every 4 hours, acid nitric gtt. V, largely diluted in water, four times daily. Passed cotton rolled in tanic acid, up each nostril, which arrested the hemorrhage.

Third day—Hemorrhage commenced three hours prior to my visit; blood very pale. Pulse almost imperceptible. Countenance anxious. Has lost quite an amount of blood. One of the most prominent indications, to arrest immediately the epistaxis.

Injected into the nostrils dr. ij comp. tinc. benzoin. In 15 minutes hemorrhage ceased. Internal pres. as before.

Fourth day—Has been no bleeding. Both nostrils completely

filled with coagula. Pulse not quite so frequent; some more force. Pres. continued.

Fifth day—Nostrils still nicely plugged; pulse as yesterday; ordered small quantities of brandy; reduced the nitric acid to three drop doses, three times daily. Continued quin. as before.

Sixth day—Patient rallying; better in every way. Quin. reduced to three grain doses; other treatment as before.

This patient continued to improve rapidly, and was dismissed on the eleventh day, and is, at this writing, (April 5), almost as well as before the attack.

REMARKS.—I visited this patient on the day that the benzoin was used, prepared to plug the nostrils posteriorly, a procedure which the parents had earnestly opposed. I was also provided with per sulph. of iron, but was induced first to try the benzoin, from reading an article or report of a case, by Prof. Barker, of New York, published in the *American Medical Monthly*, for February, 1858. I am glad to be able to add this case, as further proof of the efficiency of this remedy. When it will succeed, (and I am persuaded from the rapidity with which it produced coagulation, that it will scarcely ever fail), it is of course very much preferable to plugging.

As has already been intimated, I regard this case as being, at least so far as the condition of blood was concerned, very similar to, if not identical with, Diphtheritis.² Hence the propriety of instituting the same internal treatment as proved eminently successful in that disease.

Reports of Lunatic Asylums of Ohio.

A great number of most interesting subjects at once suggest themselves, from a brief view of these public documents, many more than can be even enumerated in the space that can legitimately be devoted to this subject in our Journal. But the extent of prevalence, causes, curability, treatment, &c., stand out so boldly that they command a passing notice.

The glaring defects and gross blunders of our national census, as to the number of insane, have inspired only doubt and distrust in the minds of scientific staticians, and we are under the greater obligations to the labors of individuals, and a few State Governments, for some data that furnish us approximating guides as to the propor-

tion of this class to the entire population. While this varies in different countries, it has been with some accuracy determined for two of the New England States, and portions of others, to be about one in six or seven hundred. By increasing to 1,000 this ratio, the insane of Ohio to-day are not less than 2,500, and of this number only about one-fifth are provided for in the three State Asylums now in operation; and when the Hamilton County Institution shall have been completed, only about one-third will be brought within the range of *curative* establishments. The remainder are in the county infirmaries, farmed out by the township trustees, in the care of their friends, or wandering at large. If any one doubts the large estimate that we have made of this class, let him take the trouble to ascertain the actual number in two or three counties where his acquaintance is extensive, and his facilities abundant and reliable, and then compare the number thus certified with the number in the census list, and he will not only be surprised, but much less credulous of our statement. And this statement we believe to be nearly 1,000 less than the reality. That this prevalence is uniform, we by no means affirm, for this, as all other diseases, is variable, and may at one time abound very much more than at another. But this difference of prevalence comes under the head of causation.

Each of these reports furnish us some data upon the subject of causes of insanity, but each to a degree discredits its own records, as they are made up of the testimony of many incompetent witnesses, and are only put upon record in conformity to a law, that must necessarily be defective. In the report of Dr. R. Hills, of the Central Asylum, we have a most valuable resumé of twenty years' experience in the accumulation of facts as far as they can be determined, from which we may safely, though cautiously, draw some inferences. Of the 3,300 under treatment for these two decades, the causes assigned in 1,300 are direct physical agencies in the form of diseases and injuries; in 1,568, moral causes, or impressions made upon the brain, through the intellectual or the emotional channel; and 432, unknown. In the numbers received during the past year by the Southern Asylum, this inference, deduced from the records of twenty years is reversed, the physical causes taking precedence, and the proportion of unknown very large; while in that of the Northern Asylum the statistics of the year nearly conform with rule.

These figures, we think, are merely the representatives of the crude opinions of friends often incompetent to judge, and sometimes

anxious to conceal facts as to habits of patients and state of domestic relations. A more intimate acquaintance with individual cases often displaces them from their location in the table of causes. The action of long continued moral causes, generating extreme impressibility of brain and nervous system, prepares the way for the *determining* action of some physical cause, and on the other hand the exhausting, depressing effect of some habitual drain by hemorrhage or excessive secretion, or defective nutrition, is suddenly invaded by strong emotional excitement in the form of some great domestic affliction, pecuniary anxiety or religious solicitude, and suddenly insanity supervenes. From all which we may fairly infer the truth of the opinion now almost universally received by experts in the management of the insane, that madness is only one of the many bodily diseases that require a treatment suited to a given physical derangement. That in all cases it is a disturbed action, or obstructed movement of the machinery through which mental and emotional manifestations are made.

CURABILITY.—The records of these three reports, especially the resumé of the Central Asylum, conform to the experience of the last 30 years in this country, England and a portion of France,—though the curability of insanity in the United States for a portion of that time has been above the average of British and French reports. And at present, it probably maintains that pre-eminence. Some of the best authorities believe it less curable now than it was forty or fifty years since, though improved modes of treatment have been devised in the meantime. This is based upon the opinion that it is more complicated with other affections of the head, and a less vigorous constitution.

But insanity follows the rule of all other acute diseases. When recent and uncomplicated, it is more amenable to curative means, than when, by long continuance, it has involved the brain or other organs in fixed morbid action, and possibly structural changes. Hence the division so often made of treatment and its results in *recent* and *old* cases; the former including those in whom the disease has lasted from a few months to one year; and the latter of all, of greater duration than one year. Of recent cases, the rate of cures ranges from 72 to 90 per cent. of those *discharged from treatment*; of the latter, (old cases,) about 25 to 30 per cent.; while most Institutions rating their cures on all cases discharged, make their per cent. about 45 to 60. Taking the insane as we find them, and making our com-

putations from the statistics of all subjected to treatment, until discharged as recovered, by death or otherwise, and we shall find that *about one-half are cured.*

Of the *treatment* of insanity, as presented by these documents, we are unable to say anything. The *results* are given, but the means by which they were obtained, are not even dimly shadowed forth. Of this, we think, the medical profession, to whose suggestions, petitionings, and early reports, these Institutions owe their birth, have some reasonable ground of complaint. We trust, however, that not many years hence, some one of the Superintendents of the many noble American Asylums, will gather together the rich accumulation of facts, experience and observation which they may furnish, and in a well digested work, reward the profession for all their interest in, and support of, these great charities. S. M. S.

OHIO STATE MEDICAL SOCIETY.

To the readers of the Ohio Medical and Surgical Journal :

As Chairman of the Ohio State Medical Society's Executive Committee, I wish to enlist your attention and co-operation in forwarding the ends for which it will meet in this city on Tuesday, the 7th of June next. To many of you I have forwarded copies of the proceedings of the meeting of last year. Such of you as do not receive such copy, are referred to the printed proceedings, as contained in the last July number of the Journal. From either of these sources you will be able to learn who constitute the several committees, work assigned, address of chairmen, &c. As it is supposed the several committees are engaged in the preparation of reports, it is hoped that aid will be given by physicians generally. Every effort will be made to render the approaching meeting both pleasant and profitable.

J. W. HAMILTON,

Chairman Ex. Com.

To Physicians and Surgeons :

As Chairman of the Ohio State Medical Society's Committee on Surgery, I wish at once to engage in the preparation of a report. I desire to obtain all the information I can in regard to the following

topics : the ecraseur, the silver suture, including vesico-vaginal fistula ; ovariectomy since June, 1852 ; trephining skull, especially for the removal of depressions attending epilepsy ; ligation of the carotids for epilepsy ; exsections of the larger joints ; prosecutions for mal-practice ; serious or fatal effects of chloroform ; disarticulation at the knee joint ; disarticulation at or about the ankle joint, with any thing important or new in surgical pathology, surgical appliances or surgical practice.

I wish to be put in possession of the material for my report with as little delay as possible. By forwarding promptly, whatever you may be able to contribute, you will place me personally under very great obligation, and, I trust, render our profession a valuable service.

Respectfully,

J. W. HAMILTON, M.D.

COLUMBUS, April 11, 1859.

From the New Orleans Medical and Surgical Journal.

Lying-in Hospital, Dublin.

OCTOBER 11th, 1858.

DR. SANFORD CHAILIE :

Dear Doctor—I have been intending for some time past to send you some account of the practice, etc., of the Dublin Lying-in Hospital, but have been prevented by various circumstances from doing so before this. This hospital was founded more than a century ago, and is the largest of the kind in the United Kingdom. It contains one hundred and thirty beds, fifteen of which are reserved for chronic diseases of the uterus and its annexes. About two thousand women are confined here annually, making an average of five *per diem*.

The medical staff consists of a master, Dr. McClintock, and two assistants, all of whom reside in the hospital. The master is elected by the Board of Governors, and holds his office for seven years. The assistants each pay five hundred dollars *per annum* for the privileges they enjoy. The *interne* pupils pay one hundred dollars for six months, or half that amount for three months, besides their board. The advantages here are very good, though not as much so as could be wished. Students are not permitted to perform operations, however qualified they may be, but can only look on while they are performed by the master or his assistants. At Vienna,

am told, students enjoy the privilege of applying the forceps, or making version when necessary.

The ventilation of this hospital is very good, and every attention is paid to cleanliness ; but notwithstanding every precaution, there are occasional epidemics of puerperal fever. In each ward is a couch on which the patient is delivered, and two hours afterwards, she is removed to her bed. A purgative is usually given on the second day after delivery, and if the patient goes on well, she is allowed to sit up on the fifth day, and is discharged from the hospital on the eighth day. Prolapsus uteri appears to be very common among the lower classes of Dublin, which is doubtless owing, in many cases, to getting up too soon after confinement.

Dr. McClintock lays great stress upon the use of the binder after delivery, to keep the uterus firmly contracted, and to diminish the size of the abdomen. In the Paris hospitals, the binder is considered useless, and is not usually applied. The patients here are always delivered on the left side, not only in natural labors, but also in all operations. In Paris they are always delivered on the back. In natural cases I think the side position is preferable, but when an operation is to be performed, I think it is much more convenient to place the patient on her back, with the hips drawn over the edge of the bed.

In all obstetrical operations here, chloroform is usually given, unless there is some special contradiction. It is especially useful when it is necessary to make version, or to introduce the hand to bring away a retained placenta.

An interesting case occurred a few days since, showing the advantages of chloroform. It was a case of retained placenta caused by spasmodic contraction of the cervix uteri. After waiting four hours without result, Dr. McClintock decided to administer chloroform, and to introduce the hand ; gradually dilate the os uteri and bring away the placenta. The patient was with considerable difficulty brought under the full influence of the chloroform, and on introducing the hand into the vagina, the os uteri was found to be dilated, and the placenta extruding, so that it was easily extracted, without introducing the hand into the uterus, which may justly be considered one of the most dangerous operations in obstetrics.

The only forceps used in this hospital are the straight forceps, but with longer blades than the ordinary short forceps. The following are considered indispensable conditions in order to render the for-

ceps applicable : 1st. "That the child be alive, or at least that there is no reasonable ground for supposing it to be dead. When the child is ascertained to be dead, the perforator and crotchet are used, being considered as less dangerous to the mother than the application of the forceps. The stethoscope renders most valuable aid in ascertaining the condition of the foetus. If the foetal heart is heard in the early stage of the labor, and afterwards the most careful examination fails to detect it, the death of the foetus may be considered as almost certain, if not entirely so. Hence it is an established rule of the hospital to ascertain if the foetal heart is audible, when the patient enters, so that if the labor becomes difficult, and instrumental aid is required, it can be ascertained with almost absolute certainty whether the child be alive or dead. 2d. "That the head has remained stationary within reach of the forceps, for six hours at least." This rule, of course, is not adhered to, when there exists any pressing complication, such as hæmorrhage or convulsions, etc. 3d. "That the membranes be ruptured and the os uteri fully dilated. 4th. "That the head of the child be so circumstanced that the ear can be distinctly felt, without the use of any force or violence on the part of the examiner." Dr. Rigby, of London, does not approve of this plan of feeling for the ear. In his "System of Midwifery," he very justly remarks : "The blades should always, if possible, be applied one on each side of the head, the position of which must be determined by the direction of the fontanelles and sutures, *not by feeling for the ear*, as is usually recommended in this country. The ear can seldom be reached without causing a good deal of pain, even under the most favorable circumstances," &c., &c. 5th. "That the state of the soft parts be such as denotes the absence of inflammation ; in other words, that they be free from undue heat, dryness, tumefaction, or morbid sensibility." These views are extracted from Hardy and McClintock's report of the hospital practice.

When the above conditions are absent and instrumental aid is necessary, craniotomy is performed with the perforator and crotchet. The cephalotribe is never used—it being considered a dangerous and unnecessary instrument. The ergot of rye is used with great caution during labor, as experience has shown that it exerts a very injurious influence on the foetus, unless it be born soon after the ergot has been given. In cases of inertia uteri, when the head presents and the os uteri is fully dilated, and stimulating enemata of salt and

water have failed to excite efficient contractions, ergot, ʒss. , is given, and the dose repeated in twenty minutes if necessary. But if the child is not born within *two hours* after the administration of the ergot, the forceps is applied and the child speedily extracted, as the experience of this hospital has been that the child was generally still-born, if not born within two hours after the ergot was given. Dr. McClintock is opposed to the administration of ergot during the third stage of labor, to produce the expulsion of the placenta. He says that if the placenta should happen to be morbidly adherent, the ergot might cause hour-glass contraction, render the operation of introducing the hand into the uterus to detach the placenta much more difficult, and, consequently, more dangerous to the patient. It is the common practice here to push out the placenta by grasping the fundus uteri and making considerable pressure, which is generally effective, if the placenta is detached.

We have recently had quite a number of cases of puerperal fever. The usual treatment consists in local depletion by means of leeches to the seat of tenderness; mercury and opium internally, and mercurial inunctions to the abdomen. I cannot say that this treatment has been more successful than many others that have been recommended for the cure of this terrible malady. The muriated tincture of iron has recently been very much in vogue in London, as a remedy in puerperal fever. It was tried in several cases here, with varied success. Two cases appeared to be much benefitted, while two others died. I have seen a sufficient number of cases to judge of its efficacy. It was not thought much of here, and was soon abandoned for the old treatment. One of the cases that appeared to be benefitted at first, died after a month's illness from exhaustion, produced by a phlegmonous inflammation of the calf of the leg. Twenty-four leeches were applied in the commencement of the attack, and then the muriated tincture of iron (ten drops every two hours) was given. The other case appeared to be convalescing, when she was attacked with arthritis in the wrist. She was removed from the hospital by her friends before convalescence, so that I am not able to say whether she recovered or not.

To give you an idea of the advantages a student has for seeing obstetrical operations, I will mention that during three months that I have been *interne* in this hospital, there have been eight forcep cases, three craniotomies, and two cases of version.

A very unnatural and interesting case of complicated labor oc-

curred a few weeks since, the details of which may interest you : B. B., æt. thirty-seven, primipara, was admitted into the hospital at noon on the 14th of September. She stated that at 9 A. M., on the 12th, she had been delivered of a dead child, at a village seven miles from Dublin. Her medical attendant discovered that there was another child in utero, and after waiting two days for its expulsion, advised her to come to the hospital. Accordingly, she was placed in a cab and brought in. On examination the os uteri was found to be half dilated, the membranes unbroken, the breech of a second child presenting, and the cord of the first hanging out of the vulva. In a short time the second child was born alive, and apparently of eight months' development. It was now discovered that there was a third child presenting also by the breech. There being some hæmorrhage, it was deemed expedient to bring down the feet and hasten delivery. The third child was also born alive. The uterus contracted, and the hæmorrhage ceased; but commenced again in about fifteen minutes, and the placentæ were still retained. There was no time to be lost; if the hæmorrhage was not speedily arrested, the patient would bleed to death. Although she was very much exhausted, it was deemed necessary to introduce the hand and bring away the placentæ without delay. This was accordingly done, giving her, at the same time, stimulants. There were two placentæ, both of which were partially morbidly adherent. The uterus now contracted firmly, and all hæmorrhage ceased; but in spite of all efforts to sustain her vital powers, she sank rapidly, and expired in a few hours after delivery, from the combined effects of exhaustion, arising from the protracted labor, the shock of delivery, and hæmorrhage. The pulse continued perceptible to the moment of dissolution. The great error committed by the "village doctor" in this case, was in not rupturing the membranes of the second foetus, soon after the birth of the first, and before the os uteri had time to contract. Had this been done, the patient would have stood a much better chance of recovery, although the adherent placentæ and hæmorrhage would have rendered the prognosis very unfavorable.

The most remarkable feature of the case, however, was revealed at the autopsy : The uterus was very large, and on its anterior surface was an *enormous fibrous tumor*, seven or eight inches long and four or five wide. The woman stated on coming in, that she had perceived a tumor in the abdomen for about two years. This shows conclusively that organic disease of the uterus does not prevent con-

ception ; and it is not a little remarkable, that utero-gestation should have gone on almost to the full term with triplets, while at the same time, there existed such a large amount of organic disease in the body of the uterus.

The children were in a healthy condition when taken from the hospital.

Yours, very truly,

W. A. McPHEETERS, M.D.

AFRICAN EDIBLES.—In Barth's very instructive, if not entertaining, "*Travels and Discoveries in North and Central Africa*," we meet with frequent notices of the articles of food, chiefly from the vegetable kingdom, used by the inhabitants of those extensive regions. The subject is interesting, both in a hygienic and economic point of view ; and as such we are now bringing it before our readers, without any regard to methodical arrangement, but rather as we find it in the volumes before us. Barth's starting point was Tripoli. He made an excursion, however, previously, in an eastern direction, through the Regency.

Soon after setting out, the travelers emerged from the palm-groves which constitute the charm of Tripoli. Then they came to the fine date-plantations of Zenzer, celebrated in the fourteenth century as one of the fairest districts of Barbary, and they pass by a great magazine of grain. Fine olive trees pleasingly alternate with the palm-grove, while the borders of the broad sandy paths were neatly fenced with the *cactus opuntia*, or prickly pear. As preparation for their nomadic life in crossing the desert, they laid in a supply of corn and dates. The fruit called gatuf of the batim tree, (*Pistacia Atlantica*,) or Barbary Mastich, is used by the Arabs for a variety of purposes. In other countries its fragrant and astringent resin is best known. The rearing of fruit trees seems to be a favorite occupation of the Berber race, even in the more favored spots of the Great Desert. The cultivation of the olive extends to the borders of the Desert. Saffron and olives are the two staple articles of industry in this region, the maritime one of Tripoli. The cultivation of grain is made productive by means of irrigation.

On the second departure of the travelers from Tripoli, their course was nearly due south, to Murzuk, on the border of the Desert. On the oases of Mizda, and some others still further south, barley and wheat in cultivation were found in the vicinity of olive

and fig trees. The soil around Murzuk, a little to the south of 21 deg. N. latitude, is very arid ; even in the plantations which surround it there are only a few favored spots, where, under the protection of a deeper shade of the date trees, a few fruit trees can be cultivated, such as pomegranates, figs, and peaches. With great labor, wheat, barley, gedheb, (or rather kédheb,) are cultivated. Culinary vegetables, including onions, are extremely scarce ; milk, except a little from the goats, is quite out of the question.

In the oases of Ghât and Barakat, Guinea corn, gero or millet, (*Pennisetum typhordeum*,) is cultivated to a much greater extent than wheat or barley. Palm-groves are repeatedly passed, and irrigation witnessed in the fields and gardens. In the valley Nghakelil richly overgrown with luxuriant herbage and adorned with fine tallha trees, was exhibited the first specimen of the *Balanites Ægyptiaca*, (hajilig, of the Arabs,) of which we shall soon speak. In this region, at the bottom of a valley skirting mountain passes, was seen the grass *Avena Forskalii*, which is very much liked by the camels. Here, also, the travelers partook of the flesh of the Wadân, (*Ovis trugdaphos*,) an animal very common in the mountainous districts of the Desert, and found often in company with the wild ox.

Though not ranking with edibles, we may mention, by the way, that in latitude 20 deg. N., the senna plant (*Cassia senna*) appeared in tolerable quantity. More german to our actual theme is the appearance, in this district, the valley of Gebi, of the absiga, (*Capparis Sodata*,) a variety of the caper, called siwak, or lirak, by the Arabs. This, writes Barth, "is an important bush, the fruit of which is not only eaten fresh, but also dried and laid up in store ; while the root affords that excellent remedy for the teeth which the Mohammedans, in imitation of their prophet, used to a great extent. The root, however, at least on the shores of the Tsad, by the process of burning, affords a substitute for salt. It is the most characteristic bush or tree of the whole region or transition between the desert and the fertile regions of Central Africa, between the twentieth and the fifteenth degrees of northern latitude." In the course of his travels, Barth saw it nowhere of such size as on the northern bank of the Isa or Niger, between Timbaktu and Ghago ; the whole ground which this once splendid and rich capital of the Singhay Empire occupied being at present covered and marked out by this celebrated bush. The berries, although ripening, (August 22d,) afforded a slight but refreshing addition to the food of the travelers.

Skirting the mountain group of Tintellust, elevated 5,000 feet above the ocean, Barth and his companions passed through the valley of Selufiet, in lat. 19 deg. N., rich in trees and bushes, but without herbage. Here he met with his old acquaintances from the Said and Nubia, the dum-tree or dum-palm, (*Cucifera Nigritia*.) This tree has a wide geographical range through Central Africa; but its chief region is that of Bornu proper. Its fruit is an essential condiment to the soup made of Negro millet or Guinea corn. At Tintellust, in the mountainous country of Air or Asben, which Barth calls the Switzerland of the Desert, he and his friends received a small supply of millet, butter, and a little fresh cheese, and they purchased two or three goats and a camel-load of durra, (*holcus sorghum*,) of the dietetic value of which last grain we shall speak hereafter.

Leaving his companions at Tintellust, Barth made a journey to Agades, in a southwesterly direction. On the way, in the village of Eghellal, at the foot of a mountain of the same name, his eyes were greeted with the sight of well-fed cattle returning from their pasture grounds. "They were fine sturdy bullocks of moderate size, all with the hump, and of a glossy dark-brown color." It conflicts much with our ideas of the great Desert of Sahara, to be told, as we are by our traveler, that in the valley of Aideras, in Air, he saw not only millet, but even wheat, the vine, and dates, and almost every species of vegetable. A little farther south, in the valley Budde, where the mimosas attained a large growth, Barth first became acquainted with the karengia or *Pennisetum distichum*, on the seed of which many of the Tawarek from Bornu, as far as Timbaktu, subsist more or less. The drink made from it is certainly not bad, resembling in coolness the fura or ghussub-water. The grass itself is a most nourishing food for cattle. The little burr-like seeds, are, however, a great annoyance to the traveler in Central Africa, by attaching themselves to every part of the dress. Hence the necessity—not neglected even by the natives—to be always provided with small pincers, in order to draw out from the fingers the little strings which, if left in the skin, will cause sores.

As the market of a place affords a pretty good indication of the dietetic usages of the people, we may begin references of this nature by speaking of that of Agades. Negro millet is the real standard of the market, and in it the merchants of the town chiefly trade. The

display of vegetables was poor; only cucumbers and molukhia (*corchorius olitorius*) being procurable in considerable plenty. The butchers' market was well furnished. Barth was gratified by a present, from a blacksmith friend of the place, with a large batta or leather box, holding butter and vegetables, (chiefly melons and cucumbers,) and the promise of another sheep. In the more favored valleys of Air or Asben, there are considerable herds of cattle. A long desert plateau intervenes between Asben and the Tigama country, a region the border one of the desert, and rich in cattle. Their slaves are busy in collecting and pounding the seeds of the karengia or azak, *Pennisetum distichum*, which constitutes a great part of their food. The desert region just mentioned is the home of the giraffe, wild ox, ostrich, etc. In this part of the journey the travelers made the acquaintance of another tree, a native of Middle Sudan, named magaria by the Arabs, and kusubu by the Kanuri. It produces a fruit of a light-brown color, nearly equal in size to a small cherry, but in other respects more nearly resembling the fruit of the cornel, (*Cornus*.) When dried, it is pounded and formed into little cakes, which are sold all over Hausa as *tuwo-n-magaria*. It may be safely eaten by a European to allay his hunger for a while, till he can obtain something more substantial. The next district to the south, traversed by the line of the fifteenth degree of north latitude, is Damerghu, an undulating rich country, the granary of, and tributary to Asben. The production of grain consists in millet of the white species; durra or sorghum is not seen. Here the travelers met once again with the first poor specimens of the magnificent tamarind tree, the great ornament of Negroland.

The desert being passed, and the travelers fairly in Bornu, and of course in Central Africa, the dietary of the people, resulting from a richer soil, extensive pastoral regions, and rivers, became more abundant and varied. The change was more marked at Tasawa, where Dr. Barth made some stay. Before reaching this place, and near a village called Baibay, the caravan was surrounded by a great many women who offered for sale "godjia" or ground-nuts, and "dukkwa" or a sort of dry paste made of pounded Guinea corn, (*Pennisetum*,) with dates and an enormous quantity of pepper. This is the meaning of dukkwa in these districts; it is, however, elsewhere used as a general term, signifying only paste, and it is often employed to denote a very palatable sort of sweetmeat made of pounded rice, butter, and honey. Leaving our readers to the

indulgence of the sweet memory of such a compound, we shall not task their attention further at this time ; but shall avail ourselves of a future opportunity to make them acquainted with the edibles and condiments of Negroland proper.—*North Am. Med-Chir. Rev.*

THE LATE PROFESSOR WILLIAM TULLY.—Last month we briefly announced the death of this distinguished author ; the intelligence was received at the moment of going to press. Warmly interested in the success of our Journal, although feeble in health, Dr. Tully hoped to be able to give a monthly contribution to its pages, but his health and professional calls did not permit it. After concluding his lectures at the Berkshire Medical College, last fall, upon his return home he commenced an essay upon *Veratrum Viride* ; he was one of the first to investigate its properties, and his manuscripts upon this article, which are quite voluminous, probably furnish the most authentic and reliable history of its advancement as a medicinal agent. And while to us it is a matter of deep regret he could not have been spared to complete it himself, it is of small importance compared with the loss to the profession of his master mind in the completion of his work upon *Materia Medica*.

The following extracts from a letter from the friend and attending physician of Dr. Tully—Dr. Church, contains intelligence which will interest many of our readers. They were politely forwarded by the gentleman to whom they were addressed.

“For a large part of his life Dr. Tully had been subject to attacks of diarrhea, and also of irritability of the bladder ; sometimes one and sometimes the other, and sometimes both at the same time. At the time of the last attack he had been free from either longer than usual, and was in his usual health and strength. The day after his return from Hinsdale and Middlefield, to which places he had been called professionally the affection of the bladder came on, and increased rapidly till it was evident that it was to prove more severe than any he had had previously. On the third day the urine became bloody, and for two or three days the evacuation appeared to be more than half blood. He had febrile irritation ; became delirious, and his strength failed rapidly, till about the sixth day when he became comatose, and died on the 9th—February 28th. For the first four or five days he suffered greatly ; when the bladder contained only two or three ounces, his pain was excruciating ; the diarrhea

was very slight. It was remarkable that while in some of his previous attacks of diarrhea I have known him to take six grains of opium every hour for twenty-four, without any disagreeable effects; indeed he was able to watch the clock and take every dose himself, in his last sickness only one grain an hour obviously increased the coma."

"He has left two daughters—unmarried; though not destitute, they will need all the property there will be left after the settlement of the estate. His books which could not have cost less than fifteen thousand dollars originally, ought now to sell for ten thousand. Mr. E. C. Herrick has just sent a catalogue of about three quarters of them, which he made himself ten or twelve years ago. It covers thirty-six pages; it contains many valuable works. If you can offer any suggestions as to the best way of disposing of them, or any portion of them, we would be very thankful to you. Are there none of the medical schools in our country to purchase any of them to add to their libraries? I know not what may be done with his manuscripts; a good compiler could make something valuable from them, and I cannot but hope that the prejudice heretofore existing against the author and his views will abate, and that eventually, due credit will be awarded to him. Few men in America have labored more assiduously through a long life for the advancement of medicine, and perhaps none with more independence of thought and judgment; and that his labors have been successful, in the highest sense of the word, is evinced by the fact, that very many of the principles taught by him twenty-five or thirty years ago, are now being adopted very extensively and by many physicians, doubtless, who know not from whom they originated. Dr. Tully was eminently a practical man, general opinion to the contrary notwithstanding.

DR. TULLY'S LIBRARY.—On a recent visit to Springfield we had the curiosity to look at Dr. Tully's library; which, as we were told, is to be offered for sale in a few months. Though all the books we examined gave ample proofs of the attention that had been bestowed upon them by their owner—the slight soiling of their paper covers, the numerous small slips of paper inserted to facilitate as references, &c.—they were in a remarkably good state of preservation; some will be found that were ancient and worn when they came into his possession, but most of them, doubtless, will appear like new books on the removal of the paper covers. A considerable number, and some of the most costly ones, as we were informed, were presented

to him by his friends, who acted wisely, doubtless, in the bestowment of their gifts; and yet a moderate fortune must have been expended in purchases made by himself. We could not but admire their neat and convenient cases also, of which there were eight or ten, each extending from floor to ceiling, but divided into four separate parts, with folding doors secured by locks and keys, with handles upon each end for the convenience of moving them. We should judge that six men without extraordinary effort, could remove the whole of these cases from the house in the space of thirty minutes, and without displacing a single volume. There were many, however, for which there was not room in the cases. When in New Haven his library was insured for nine thousand dollars; it contains rare and valuable works which were never for sale in American book-stores.

To facilitate our object we were politely shown a catalogue in manuscript, prepared some ten or twelve years ago, covering thirty-six pages of foolscap. Only about three-fourths of his books at that time were included in it however, and many have been added since; and besides there are many works of from two to six or eight volumes, and several of a considerably larger number. The first class we noticed on the catalogue was the Dictionaries, of which there were from seventy-five to eighty volumes; some of them must have been very expensive. Medical books, of course, constitute the largest class; but there are between two hundred and fifty and three hundred upon botany; a large number upon chemistry; upon zoology, entomology, mineralogy, &c., and a considerable number upon the natural history of man. With a quick and clear perception of the beauties of nature, and the importance of a knowledge of her laws, early in life Dr. Tully became a successful cultivator of the natural sciences, and spared no pains or expense in procuring books, particularly upon botany and chemistry. Up to within a short time of his death he was familiar with most if not all there was known of these sciences; indeed the world is indebted to him for important discoveries and improvements in both of these sciences. We were shown several large quarto volumes of botanical engravings, some of them as large as life and beautifully colored, giving the most exact and life like representations of all parts of the plants—these must have been very expensive. There is also a large collection of miscellaneous works, encyclopædias, books of travel, biography, history, geography, several fine atlases, complete sets of

medical and scientific journals, and of Bulwer's and Sir Walter Scott's novels; and pamphlets without number, some of which must still be valuable. We were told also that he had been a diligent collector of portraits, of which he has many hundreds of distinguished men.

This collection of books, the original cost of which could not have been less than twenty thousand dollars, will be sold, probably, for much less than its present real value; it is a pity that they cannot be kept together. The catalogue will probably be revised and published, and due notice will be given of the time and place of sale. It is hoped that some of his manuscripts upon medicine, of which he has left a large amount, will yet be published.

Dr. Tully was one of the remarkable men of the age—one of the world's workers, whose labors are seldom appreciated while they live; that he has done more to modify and improve the practice of medicine in this country than any other American physician, is the opinion of those who sat under his teachings twenty-five or thirty years ago; and it will be acknowledged, probably, in time, that he has done more to reduce medicine to a science than any American author. The most important achievements in medicine, as in everything else, are seldom made amid shouts of applause, but by those unobtrusive men who have thought closely and studied long; who have wasted life and fortune in the pursuit of knowledge. If science is of any use in medicine, and is to be encouraged, then surely Dr. Tully's memory should be cherished by the physicians of his native country; and it is hoped that some one who is competent will ere long do justice to it."

In conclusion we give an extract from a review of Dr. Tully's *Materia Medica* in October last, which is a very just tribute to his character as a scholar and writer.

"We believe that this is the most important work on the subject of which it treats which has appeared in this country, or which has been published in our language in the present century. Dr. Tully is one of the solid men of the profession. Of mature experience, a profound botanist, an excellent theoretical chemist, a thorough medical scholar, a close and discriminating observer; he is the very man for the task he has undertaken. The *Materia Medica* has long needed the influence of some master mind, one who could infuse into it a new life, and set the medical world a thinking. We have gone on imitating and compiling, saying what others have said, and

treading in the old beaten path a little longer than is profitable. The time has come for an original treatise, by a man thoroughly competent, who has the confidence of the profession. We now have such a work, or at least the beginning of one.

Dr. Tully has very little regard for ancient dogmas or venerated names; no man's opinions are less influenced by mere authority; sometimes, indeed, he seems to lean to radicalism; he lays violent hands upon errors hoary with age, and respectable from lineage and association. In doing this he has not, perhaps, a sufficient regard for the shock he is giving to the established faith, and the chaotic state which always succeeds sudden revolution. We cannot, however, but admire his boldness and vigor, while we wish success to his efforts at re-construction. While his opinions are, in a sense, revolutionary, he has none of the shallowness, the recklessness and the quackery which usually characterize the common brood of reformers. He lacks the necessary elements of the fanatic. In truth, he has not warmth of imagination enough to make him even an enthusiast. On the contrary, he is cold, intellectual, sceptical. He insists on a reason for everything, and fears not to attack the most cherished prejudices. Dr. Tully's habitual distrust of authority led him to investigate errors, and to track them to their fountains. Whatever may be thought of his success in adding to the truths of medical science, or constructing a system of his own, it cannot be denied that he has removed a vast amount of rubbish, thus facilitating the progress of those that follow."—*New York Jour. of Materia Medica.*

DIPHTHERIA.—At a recent meeting of the Medical Society of London, a very interesting paper on diphtheria was read by Dr. W. R. Rogers, who gave a concise history of the nature and pathology of the disease, illustrated by several cases which had fallen under his own notice. The work of Bretonneau was the foundation of our modern views on diphtheria; and the descriptions of that accurate observer were found to be verified by the cases which had lately occurred in this country. Dr. Rogers thought that diphtheria was a totally distinct disease from scarlatina, with which, indeed, it had but few features in common; although the fact that the throat was affected in both often led to errors in diagnosis. Dr. Rogers did not believe that the existence of the *oidium albicans* was an essential

feature of diphtheria, but was to be regarded as an accidental complication. The best treatment of diphtheria consisted in the application of local remedies, such as hydrochloric acid, with an equal quantity of glycerine, and the administration of nutritious food and stimulating beverages—the quantity of beer and wine which patients could bear being often quite astonishing. Dr. Harley, in the course of the discussion which followed the reading of the paper, offered some highly important observations on the nature of diphtheritic pseudo-membranes, and the mode of their formation. From a careful examination of these structures he had come to the conclusion that they were not to be regarded as fibrinous membranes, but rather as layers of coagulated mucus mixed with epithelial scales, and gradually concreting and solidifying into tubes and casts. He thought with Dr. Rogers, that the presence of the *oidium albicans* was not essential to the disease, and in many well-marked cases which he had carefully examined with the microscope, he could find no trace of the parasitic fungus; but in one case, where he had not found the fungus at first, he found it some hours afterwards, so that he considered the latter found a nidus in the diphtheritic exudation in certain cases. The very insidious nature of the disease was alluded to by most of the speakers; and from the absence of any well-marked symptoms at the commencement, treatment was too often neglected until after the period when it could be useful. Diphtheria should be regarded as a blood-disease of a peculiar nature, attended invariably by the production of a pseudo-membrane on some region of the body, and the early treatment consisted in cauterizing the part where it first developed itself, and at the same time supporting the strength of the patient. Tracheotomy, which is the only resource—and that a hazardous one, in the cases where the trachea is lined with a false membrane—was very little discussed at the meeting from want of time.—*Med. Times and Gaz.*, Feb. 5, 1859.

CAUCASIAN INSECT-POWDER.—The so-called Persian, but properly termed Caucasian insect-powder, has long been known to the Trans-Caucasian populations, under the name of “Guirila.” In that paradise of vermin, it is an article of a very considerable commerce, and it is not only carried inland through Russia in large quantities, but is also exported to Germany and France. A large depot exists

at Vienna. It is a coarsely-ground powder of a green color, and penetrating odor, formed of the flowers of the *pyrethrum carneum*, and *roseum*, which grow in the Trans-Caucasus at a height of 5,000 or 6,000 feet. This powder possesses the peculiarity of rapidly stupefying the insects, which soon afterwards die. Strewed about the room or bed, it proves a poison to fleas, lice, flies, etc. In the military hospitals in hot countries it is an invaluable preventive of the formation of maggots in wounds, and the more so inasmuch as its use is attended with no disadvantage, unless employed in large quantities in closed bedrooms, when it may give rise to confusion in the head, such as is produced by flowers or new hay. It has been long used as a means of preserving insects; and can not be too strongly recommended to those who have the care of herbarian and other natural history collections, liable to the depredations of insects. Unfortunately the demand for the powder has been so great of late as to lead to its adulteration by the addition of the stalks and leaves of the plants to the flowers, and to the mixing of the new with stale powder. As a general thing, the powder purchasable in Germany is very different from the Asiatic in color, smell, and efficiency.—*Medical Times and Gazette*, March 5, 1859, from *Buchner's Report*.

ARTIFICIAL ANUS—How long can an individual live with an inguinal anus, made soon after birth, in consequence of a total absence of the anus orifice? This question was lately answered by M. Rochard, chief surgeon of the Seamen's Hospital of Brest. This gentleman sent a paper to the Academy of Medicine of Paris, founded upon five cases, the subjects of which were operated upon soon after birth, and an artificial anus made in the left groin. The patients have all lived to a more or less advanced age, one of the operations having been performed by Duret so long ago as 1793. Two questions arose after the favorable report of the paper made by M. Robert: 1st. Shall the surgeon, in cases of imperforate anus, search for the lower end of the rectum within the pelvis, if, previously to incising the perineum, he cannot feel the rectal pouch? 2d. Shall the artificial anus be made in the groin or the loins? Many children have died from the handling of the pelvis and the search after the lower end of the

rectum, which sometimes is not found at all. From the discussion and the merits of the question, it would appear that it is safer to open the groin than cut through the perineum, if the pouch is not felt. As to the second question, it is obvious that the fear of wounding the peritoneum, and of giving rise to hernia, should not make us give up the inguinal anus, as this said infirmity is better concealed and managed by the patient in the groin than in the loins.—*Med. News.*

SURGEONS IN THE BRITISH NAVY.—The following extract from a recent speech in the House of Commons of the first Lord of the Admiralty, Sir John Parkington, gives encouraging assurances that the position of these officers will be improved, and that the same comparative rank and emoluments will be allowed them as has been given by a recent warrant to their brethren in the army :—

“ In answer to a question put to me yesterday, I stated that I should avail myself of this occasion to allude to a subject which has lately excited very great interest—viz., the present position of the surgeons of the Royal navy. (Hear, hear.) I am sorry to find that my answer has been very much misunderstood. I by no means intended to imply that I had any doubt or hesitation as to the course to be adopted. On the contrary, I then meant, as I mean now, to express in distinct terms my opinion that the present position of the surgeons in the navy is not satisfactory. (Hear, hear.) But I go still further. The complaints we now hear from these officers are, no doubt, much founded upon the late warrant issued in respect to the army ; but I think that even before the date of that warrant the surgeons of the navy were not relatively placed on an equality with their brethren of the army. Now, however, they have an unanswerable claim to the consideration of their country. Nothing in the military service could be nobler or more gallant than the manner in which the medical officers of the navy have discharged their duties under the most trying and painful circumstances, and they are, therefore, entitled to more liberal treatment than they now receive. Their claim is based upon two grounds—first, it is due to them as gentlemen that their position should be improved ; and, secondly, public policy requires that the services of this most useful branch of the profession should be more highly appreciated and better requited, so that able and efficient men may not be deterred from join-

ing the navy. It is, therefore, our intention in spirit and in substance to concede to naval surgeons the advantages which they justly seek to obtain. At the same time I will not and cannot now commit myself to the exact mode in which that object shall be carried out. The peculiarities of the naval service may render it inconvenient to follow the precise rule pursued in regard to the army; but these and other points of detail will be duly considered before our plan is finally decided upon."—*Med. Times and Gaz.*, March 5, 1859.

R U P T U R E.

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Will cure nine cases out of ten of all reducible Hernia (or Rupture), when properly applied and our directions followed. We have the privilege of referring to Profs. VALENTINE MOTT and WILLARD PARKER, of New York; Profs. R. D. MUSSEY, GEO. C. BLACKMAN, J. P. JUDKINS, Dr. W. H. MUSSEY, and other surgeons of Cincinnati. We also have the privilege of referring to many persons re-iding in Cincinnati, as well as in New York, who have been cured by the use of this Truss. It has met the decided approval of the entire Medical and Surgical Profession who have examined it. We also manufacture and keep for sale.

E L A S T I C S T O C K I N G S ,

for cure of varicose veins; a new style Suspensory Bandage, for treatment of varicocele, hydrocele, etc. Instruments for treatment of Bow Legs, Club Feet, Curvature of Spine, and all other physical deformities.

A B D O M I N A L S U P P O R T E R S ,

Which are worn with much comfort, having no steel springs, yet are perfectly elastic, with shape and pressure graduated to suit the case where required. Also, a general assortment of all other kinds of Trusses, Supporters, and Shoulder Braces, on hand or made to order.

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DR. McMUNN'S ELIXIR OF OPIUM.

THIS IS THE PURE AND ESSENTIAL EXTRACT FROM THE NATIVE DRUG.

It contains all the valuable medicinal properties of Opium in natural combination, to the exclusion of all its noxious, deleterious, and useless principles, upon which its bad effects depend.

It possesses all the sedative, anodyne and antispasmodic powers of Opium,
To produce sleep and composure. To allay convulsions and spasmodic action.

To relieve pain and irritation, nervous excitement and morbid irritability of body and mind, &c.

And being purified from all the noxious and deleterious elements, its operation is attended by

No sickness of the stomach, no vomiting, no costiveness, no headache,

Nor any derangement of the constitution or general health.

Hence its high superiority over Laudanum, Paregoric, Black Drop, Denarcotized Laudanum, and every other opiate preparation.

THE ELIXIR OF OPIUM IS GREATLY SUPERIOR TO MORPHINE.

1. In its containing all the active medicinal virtues of Opium in native combination, and in being its full representative, while Morphine, being only one of its principles, cannot alone, and that in an artificial state of combination too, produce all the characteristic effects of so triumphant a remedy, when four or five of its other valuable principles are excluded.
2. In its effects, the Elixir is more characteristic, permanent, and uniform, than any of the *artificial compounds* of Morphine.
3. And as a *Preparation*, it is not liable to decompose or deteriorate like the *Solutions of Morphine*; and thus is obviated a serious objection, which has prevented the latter from being used with precision and effect.

To speak summarily, the Elixir of Opium, as a remedy, may be adopted in all cases in which either Opium or its preparations are administered, with the certainty of obtaining all their salutary and happy effects, without being followed by their distressing and pernicious consequences. And in the greatest number of those cases in which no other form of opiate can be used without occasioning the worst effects, it can also be used with the most eminent success and the happiest results.

The discovery of this inestimable preparation, so highly purified from all the objectionable elements of the native drug, without ever changing or impairing its medicinal virtues or efficacy, is a triumph in the chemical analysis of opium never before achieved, and places the Elixir of Opium pre-eminent in the list of all the preparations of opium hitherto made.

Those who take opium and its ordinary preparations, cannot be ignorant of the fact, that its distressing and pernicious effects result from the operation of its deleterious principles, and that the tremors, languor, and lassitude with which its devotees are afflicted, and for which they repeat the dose to relieve, are sensations of its own creation. In such cases, this preparation will afford a gratifying substitute.

But in consequence of the exclusion of these deleterious principles from the Elixir of Opium, it is not liable to derange the functions of the system, nor injure the constitution and general health—hence its high superiority in all cases in which the long-continued and liberal use of opiates is indicated and necessary to allay pain and spasmodic action, and induce sleep and composure, as in cases of fractures, burns or scalds, cancerous ulcers, and other painful affections.

It possesses yet another important advantage, which is of paramount consideration in the treatment of some of the most violent and dangerous spasmodic diseases, such as Tetanus, Epilepsy, Hysteria, Tic Doloieux, Convulsions in Hydrophobia, &c., &c., which is, that the quantity necessary to overcome and control diseased action in those dreadful maladies, is not limited by the deleterious

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PART FIRST.

ORIGINAL COMMUNICATIONS.

The Twelfth Annual Meeting of the American Medical Association.

LOUISVILLE, May 3, 1859.

The Association met at eleven o'clock A. M., in Mozart Hall, the President, Dr. Harvey Lindsley, of the District of Columbia, in the chair, supported by Drs. W. L. Sutton, of Kentucky, Thomas O. Edwards, of Iowa, Josiah Crosby, of Massachusetts, and W. C. Warren of North Carolina, as Vice Presidents, with Drs. Alexander J. Semmes, of the District of Columbia, and S. M. Bemiss, of Kentucky, acting as Secretaries. Dr. Caspar Wistar, of Penn., Treasurer, was also in attendance.

The President announced the Rev. Mr. Robinson, of Louisville, who opened the proceedings with prayer.

Dr. Robert J. Breckenridge, chairman of the committee of arrangements, then welcomed the delegates to the city.

Prof. Joshua B. Flint, of Louisville, accompanied by Drs. Sutton, Chipley, Spillman and Snead, then came forward and addressed the President as follows :

Mr. President : At a late annual meeting of the "State Medical Society of Kentucky," the following resolution was unanimously adopted, and the gentlemen before you, all of them ex-Presidents of the Society, constituted a committee charged with carrying it into effect :

Resolved, That ——— be a committee to wait upon the A. M. Association, so soon as it shall have opened its session in Louisville,

and in behalf of this Society bid it welcome to the medical jurisdiction of Kentucky, assure it of the cordial interest of the profession of the State in the objects and purposes of its institution, and of the readiness of this Society to co-operate in all its endeavors to promote the honor and usefulness of our common calling.

In regard to assurances of welcome, Mr. President, so far as they apply to yourself and your associates, as individual guests of your Kentucky brethren, those gentlemen would hardly pardon me for adding a word to the general terms of the resolution. Already, if I mistake not, there are demonstrations of the spirit of hospitality, which render any assurances on that subject worse than superfluous.

But I am happy to assure you, Mr. President, that the Association over which you preside, in its corporate capacity, with its well known purposes and ends, will find an equally cordial reception in the general community which it has now honored with its presence. The people of Kentucky, sir, are generally supposed to appreciate as it deserves every enterprise of a public spirited or philanthropic character which presents itself to their notice, and I think I may say especially disposed to befriend the cause of Medical Education. They have certainly done somewhat a little to their credit in evidence of their intelligent interest in the Medical Science and the best means of its advancement. Through the munificence of the State, in one case, and of this liberal city in the other, two medical libraries have been procured in Kentucky, each of which is superior to any and all the public collections of medical books that can be found in most of the other States of the Union. Not more than two of our sister States, so far as I can learn, can be compared with us in this interesting particular.

One of those Libraries, belonging to the Medical Department of the University of Louisville, as its best estate, numbering 4,000 volumes, you will doubtless visit during your sojourn among us; and, although much defaced and mutilated by the conflagration which laid that institution in ruins two years ago, you will still find it to be a large and choice collection—adequate to the requisitions of medical research, and presenting satisfactorily the course of medical literature from the time of Hippocrates to the present day.

The other library to which I refer belongs to the Medical Department of Transylvania University, and contains 8,000 volumes. I hope that not a few of the members of the Association, before leaving Kentucky, will find their way into that also, in the course of a

visit to the beautiful inland city in which it is located—a city distinguished throughout the land for the general intelligence and refinement of its population, as well as for the eminent public men who have signalized it as their home ; but to medical men, not only of our own, but of foreign countries, especially memorable as the residence of the great lithotomist of our day and surgical patriarch of the West—Benjamin W. Dudley.

Such benefactions as these to the means of medical study, attest, as I have already intimated, so enlightened an interest in the improvement of our Profession as to guarantee not only a welcome to the Association which represents it, but efficient co-operation in its endeavors on the part of the Profession and people of Kentucky.

May your present session, Mr. President, be an agreeable one to the members of the Association, and prove eminently beneficial to the interests of American medicine.

The Secretary, Dr. Bemiss, then called the roll of the members of the Association, and two hundred and forty gentlemen were in attendance.

The President then appointed the following gentlemen a committee on voluntary essays: Drs. L. P. Yandell, of Kentucky, Bryan, of Philadelphia, and Comegys of Ohio.

Dr. R. J. Breckenridge, from the committee of arrangements, announced the hours of business from 9 A. M. to 12 M., and from 3 P. M. until such hour as the convention should adjourn upon resolution, which arrangement was adopted.

Dr. Harvey Lindsley, the President of the Association, then read his retiring address, which was listened to with marked attention, and was an eloquent tribute to the dignity of the medical profession and the importance of its improvement.

After he had concluded, Dr. Landon A. Smith, of New Jersey, moved that the thanks of the Association be tendered to the President for his able and eloquent address, and it was ordered to be placed in the hands of the appropriate committee, for publication among the proceedings of the meeting.

Dr. Caspar Wistar, chairman of the committee on publication, read the annual report ; and, on motion of Dr. Sayers, of New York, the following resolutions, appended to it, were unanimously adopted :

Resolved, That hereafter every paper intended for publication in the Transactions must not only be placed in the hands of the com-

mittee of publication by the 1st of June, but it must also be so prepared as to require no material alteration or addition at the hands of the author.

Resolved, That authors of papers be required to return their proofs within two weeks after their reception, otherwise they will be passed over and omitted from the volume.

Adjourned until 3 o'clock, P. M.

AFTERNOON SESSION.

Dr. W. L. Sutton, one of the Vice Presidents, took the chair in the absence of the President.

Dr. D. Meredith Reese, of New York, chairman of the committee on Nominations, reported the following officers for the ensuing year: President—Henry Miller, of Kentucky.

Vice Presidents—H. F. Askew, Delaware; Chas. S. Tripler, U. S. Army; L. A. Smith, New Jersey; Calvin West, Indiana.

Treasurer—Caspar Wistar, Pennsylvania.

Secretary—S. M. Bemiss, Kentucky.

Dr. Sayre, moved the adoption of the report, which was unanimously agreed to.

Dr. Brainard, of Illinois, moved the appointment of a committee to conduct the newly appointed officers to their respective chairs. The acting President selected Drs. Brainard, of Ill., Mattingly, of Ky., Sutton, of Ind., McDowell, of Mo., and R. J. Breckenridge, of Ky., and they accordingly performed the duties assigned to them.

The newly elected President, on taking the chair, addressed the convention in substance as follows:

Gentlemen of the American Medical Association: I am wholly at a loss to command language to express the deep sense of obligation put upon me by calling me to the Presidency of your Association. It is an honor any man may well be proud of, and although I admit, in all sincerity, that you might without difficulty have selected an individual more worthy the position, I may be allowed to say you could not have conferred it upon one who would prize it more highly or cherish it longer with the most grateful recollection. I do esteem it the greatest honor ever conferred upon me by the profession that I love and to which I have devoted a long life; nay, more—it is the greatest honor that could be conferred upon any man by the medical or any other profession in this or any other country;

for any decoration of honor or any mark of approbation conferred by a crowned head I should regard as a bauble in comparison. Who are you, gentlemen, when rightly considered? You are the rightful representatives of the great American Medical Profession—an army forty thousand strong, and a body of men, no matter what captious criticism may say in disparaging comparison with the European branch of the profession, in my humble judgment, far superior to the same number of medical men to be found in any quarter of the globe. Although as a body you may not be so learned, so critically and nicely framed in all the minutiae of the profession, yet, for strength, integrity and precision in all the great principles guiding to a successful combat with disease, this body is equal, if not superior, to that of any kingdom of continental Europe.

To be called to the Presidency of such a body of men, is in my sober judgment, the greatest compliment that could be conferred upon mortal man, provided that man is a devotee of medicine, who has given his whole mind, soul, heart and strength individually to the profession, and has that high regard for it which will not suffer any less noble pursuit to interfere with the daily though laborious duties of the profession. Coming so recently from a sick bed, and still enfeebled in health, I beg to be excused from further remarks, and desire you to accept this brief and imperfect acknowledgment of the distinguished honor conferred upon me, instead of what, under other circumstances, I might be disposed to say.

The President, after this graceful address, sat down amid much applause; when Dr. R. J. Breckenridge moved that the thanks of the Association be tendered to the retiring officers for the faithful and assiduous manner in which they have conducted the business committed to their charge; which was unanimously adopted.

A long and discursive debate then ensued on the admission of members by invitation. The plan of organization permits practitioners of respectable standing from sections of the United States, not otherwise represented at the meeting, to receive appointment, by invitation, of the meeting, after an introduction from any of the members present, or any absent permanent members, to hold connection with the Association until the close of the annual session at which they are received, and to be entitled to participate in all its affairs as in the case of delegates. The point of difficulty seemed to be whether the invitations should be extended by the committee of arrangements or by open vote of the Association. It was finally

settled by referring all the applicant's names to the committee on arrangements.

Dr. J. B. Lindsley, of Tennessee, offered the following :

Resolved, That a committee of three be appointed by the Chair, to inquire into and report upon the propriety of dividing the Association into sections, for the purpose of performing such parts of its scientific labors as may relate to particular branches of medicine and surgery.

Dr. Brodie moved its reference to the nominating committee.

Dr. Brainard explained at some length the object of the resolution of inquiry, and enforced its adoption as the means of giving more effect and usefulness to the proceedings of the Association, the reports of which had heretofore gone out unmatured, in consequence of the want of concentrated action.

A motion by Dr. Sayre to lay the motion on the table was negatived, and the motion of Dr. Lindsley was then adopted.

Dr. Davis moved that no person be permitted to speak more than twice on the same subject, or more than ten minutes at one time, except by consent of the Association ; which was adopted.

The Standing Committee on Prize Essays was called on for their Report, but without a response. This was also the case with the Committee on Medical Education. The Committee on Medical Literature had no Report to present.

A letter from Dr J. G. F. Holston, of Washington, Chairman of the Special Committee on the Microscope, was read, reporting progress, and begging a continuance for more extended investigation, which was referred to the Committee on Nominations.

A letter from Dr. Stephen Smith, of New York, from the Special Committee on Medical Jurisprudence, had the same reference.

The Special Committee on Quarantine was not ready to report.

Dr. Mattingly, of Kentucky, from the Special Committee on Diseases and Mortality of Boarding Schools asked a continuance until next year, in order to obtain further information requisite to the full investigation of the important subject. The request was referred to the Committee on Nominations.

The Special Committees on Surgical Operations for the relief of Defective Vision, on Milk Sickness, and on the Blood Corpuscle, had the same reference.

A Report from the Committee on Medical Ethics, signed by Dr. John Watson, of New York, was read, laid on the table, and made

the special order for to-morrow, at 12 o'clock M. This is an important subject, and will probably give rise to much debate to-day. We publish the report in full, as follows :

To the American Medical Association :

The Committee on Medical Ethics beg leave to state, that, of the subjects referred to them at the last meeting of the Association, they find the following notice in the minutes :

“ Dr. Grant, of New Jersey, presented a complaint made by the Newark Medical Society, against the New York Medical College, for a violation of the ethics of the profession. Dr. Edwards, of Iowa, presented a similar complaint, and Dr. Oakley, of New Jersey, a complaint from the Union and Essex County Medical Society.”—*Transactions*, vol. xi, p. 41.

Upon these several complaints, your committee beg leave most respectfully to report :

That the two complaints from the Medical Societies of New Jersey refer only to one and the same grievance, the particulars of which are set forth in a memorial which was presented to the American Medical Association on the 6th of May, 1848, and which is entitled, “ Statement of the Newark Medical Association in reference to a Diploma granted by the New York Medical College.”

The facts stated in this memorial, which is now appended to this report, were, during the last annual meeting of the American Medical Association, examined as carefully as time and opportunity would allow. The charges therein contained against the New York Medical College, were admitted to be true by Dr. Horace Green, President of said College, who, in apology for the same, submitted a written statement to your committee, which was at the time accepted as satisfactory by the gentlemen then present before your committee, on behalf of the parties aggrieved ; and being afterwards presented with a verbal report by the committee, was received and entered upon the minutes, in the following terms :

“ Whereas, it appears from undoubted testimony, that the New York Medical College have conferred the degree of Doctor of Medicine upon a notorious quack, of the name of John F. Dunker, of Newark, the Faculty, in the person of the President of said College, wish here to declare, that the degree was obtained under gross deception and false testimonials furnished by said Dunker and his friends : and they therefore revoke and annul his diploma, and de-

clare said Dunker to be unworthy of patronage or support from authority conferred upon him by this diploma."—*Transactions*, vol. xi. p.—.

These complaints being thus disposed of, your committee have only to add in reference to them, that the memorial presented to the American Medical Association from the Newark Medical Association, is worthy of special notice, as setting forth the negligent manner in which mere verbal and hearsay statements are at times accepted in place of authentic written testimonials, from individuals presenting themselves as candidates for the honors of our profession at some of the Medical Colleges of this country. In this respect, there is reason to believe that the New York Medical College does not stand alone; and the publication of the accompanying memorial may be of service in putting a permanent check to this crying evil.

The only other complaint referred to your committee, was that presented by Dr. Edwards, of Iowa, preferring a charge from the Dubuque Medical Society, against one of her members who had been expelled for an alleged infraction of the code of medical ethics. This complaint does not appear to be of such a character as to require adjudication here. It has, since the last annual meeting of the American Medical Association, been adjudged by the Iowa State Medical Society [see *Transactions of the annual meeting of said Society*, published at Dubuque, Iowa, 1858] and having been then settled in the state in which the parties reside, it should now be dismissed.

All of which is respectfully submitted.

JOHN WATSON, M. D., Chairman.

NEW YORK, April 28, 1859.

Continuances were asked by the Committees on the Pons Varolii, Medulla, Oblongata, and Spinal Marrow—their Pathology, and Therapeutics; on American Medical Necrology; on the Hygienic relations of Air, Food and Water, the Natural and Artificial Causes of their Impurity, and the best methods by which they can be made most effectually to contribute to the public health; on the Effect of the Virus of Rattlesnakes, &c., when introduced into the system of the Mammalia; on the Climate of the Pacific Coast, and its Modifying Influences upon Inflammatory Action and Diseases generally; on the Constitutional Origin of Local Diseases, and the Local Origin of Constitutional Diseases; on the Physiological Effects of the Hy-

dro-Carbons; on Epilepsy; on the Causes of the Impulse of the Heart, and the Agencies which influence it in Health and Disease; and on the best substitutes for Cinchona, and its Preparations in the Treatment of Intermittent Fever, &c.; all of which were referred to the Committee on Nominations.

The Special Committee on Government Meteorological Reports made a report, written by Dr. R. H. Coolidge, of the U. S. Army, but read by Dr. Paul F. Eve, of Tennessee, which was referred to the Committee on Publication.

The Committee appointed in May, 1857, on Criminal Abortion, submitted a report written by Dr. Storer, of Boston, which was read by Dr. Blatchford, of New York, and referred to the Committee on Publication. The following resolutions, appended to this report, were unanimously adopted:

Resolved, That while physicians have long been united in condemning the act of producing abortion, at every period of gestation, except as necessary for preserving the life of either mother or child, it has become the duty of this Association, in view of the prevalence and increasing frequency of the crime, publicly to enter an earnest and solemn protest against such unwarrantable destruction of human life.

Resolved, That in pursuance of the grand and noble calling we profess—the saving of human lives—and of the sacred responsibilities thereby devolving upon us, the Association present this subject to the attention of the several Legislative Assemblies of the Union, with the prayer that the laws by which the crime of procuring abortion is attempted to be controlled, may be revised, and that such other action may be taken in the premises as they, in their wisdom, may deem necessary.

Resolved, That the Association request the zealous co-operation of the various State Medical Societies, in pressing the subject upon the Legislatures of their respective States, and that the President and Secretaries of the Association are hereby authorized to carry out, by memorial, these resolutions.

The convention then adjourned until to-morrow morning at 9 o'clock.

SECOND DAY'S PROCEEDINGS.

WEDNESDAY, May 4, 1859.

The President, Dr. Miller, called the Association to order at 9 o'clock.

Dr. D. Meredith Reese, Chairman of the Committee on Nominations, called attention to the fact that the committee could not act definitely until the place for next year's meeting should be designated. He stated also, that the Medical State Society of Connecticut had requested that an amendment to the Constitution, proposed two years since, should be taken from the table, relative to the time of meeting.

It was moved by Dr. Blatchford, and seconded by Dr. Sayre, that the amendment to the third article of the Constitution be taken up, which proposes to add after the words "first Tuesday of May" the words "or first Tuesday of June," and after the words "shall be determined" add the words "with the time of meeting."

The amendment was adopted by a constitutional vote.

Dr. D. M. Reese also stated that the Connecticut State Society had extended a pressing invitation to the Association to hold its next meeting at New Haven; which invitation was referred to the Committee on Nominations.

Dr. Reese also called attention to the necessity of some radical change in the mode of appointing committees to prepare treatises on scientific subjects to be reported at the annual meetings. It had been seen, that, on yesterday, a large majority of the committees made no reports, and did not even see proper to send in any communication explanatory of delay. The difficulty heretofore has originated in the mode of selection adopted by the Nominating Committee. It has been customary for gentlemen to hand in their names and the proposed subjects on slips of paper, and the committee, without further investigation, have so published in the annual reports. Thus it has happened that appointments have been most injudiciously made, and gentlemen to whom a special duty has been assigned have been found to know less of that than any other subject. He therefore hoped that no committee of last year would be re-appointed or continued from which no Report had been had and no communication received.

On motion, the Nominating Committee was unanimously instructed to act upon the suggestions of the chairman, who also stated that

there should be some definite expression of disapprobation as to the course of those gentlemen who had volunteered essays, and had their names reported in the newspapers and spread over the land, and then paid no further attention to the matter.

Dr. Flint, from the Committee on Prize Essays, begged leave to report that they had received four dissertations in time for a careful and thorough examination, and two others, quite voluminous, only two days before the meeting of the Association. The latter we have felt constrained to exclude altogether from the competition of the present year, on account of the absolute impossibility of reading them with a critical purpose and effect. The others have been carefully examined by all the surviving members of the committee—one estimable associate, Dr. Evans having been called from all his earthly labors before the active duties of the Committee began.

More than one of the four essays we have examined exhibited much labor, and a commendable scholarship in their preparation—are voluminous, and in some respects very meritorious papers; but, in the unanimous judgment of the Committee neither of them possesses the degree and species of merit which should entitle its author to the Association's Prize.

The Committee beg leave furthermore to report that, in their opinion and as the suggestion of their own recent experience, the Association should determine, in more precise and formal manner than has yet been done, the terms and conditions of competition and of success in the contest for prizes, for the government alike of contestants and the committee of adjudication, and that a committee be now appointed to consider and report upon that subject.

Dr. Gordon, of Ohio, from the Committee on Epidemic Cholera, made an interesting writ'en Report; which was read, approved, and referred to the Committee on Publication, and the request of Dr. Gordon, that the Committee be continued, was referred to the Committee on Nominations.

Dr. J. B. Lindsley, chairman of the Committee appointed to inquire into the propriety of dividing the Association into sections, for the better performance of its work in considering the various branches of medicine and surgery, recommended the adoption of such plan as being indispensably necessary to making this body a working scientific association. They do not deem it necessary to enter into any argument in favor of this plan, it being the one already universally adopted by similar bodies. They would simply

recommend, for the present, a division into the following sections, as being most suitable to facilitate the transaction of business, viz :

1. Anatomy and Physiology.
2. Chemistry and Materia Medica.
3. Practical Medicine and Obstetrics.
4. Surgery.

The committee do not propose that this subdivision of labor shall in any manner interfere with the regular business of the Association as now conducted ; but only that after having assembled each day in general session, each section shall meet separately for the purpose of hearing and discussing papers on such subjects as properly belong to them, and they therefore recommend that the Committee of Arrangements for the ensuing year be requested to provide suitable accommodations for the services of these sections, and that each of said sections shall be authorized to make such arrangements as may be required for the proper transaction of its business.

This report was considered, and adopted after a very able speech in its support by Dr. Davis.

Dr. J. W. Singleton, of Ky., moved the suspension of the rules for the introduction of the following :

Resolved, That in the death of Dr. A. Evans, of Kentucky, the Association has lost one of its most manly and efficient members, and society a friend and benefactor.

The resolution was unanimously adopted.

Dr. W. L. Sutton, under the resolution appointing a Committee on registration of births, marriages, &c., proposed a plan of general action, an abstract of which he read on motion of Dr. Gibbs, of S. C., and on motion of Dr. L. P. Yandell the subject was referred to a committee, to report during the present session.

Drs. Sutton, Lindsley, W. R. Gibbs, Bryan, Pitcher and Crosby were appointed such committee.

Dr. Blatchford stated that he had received from Dr. Willard, Secretary of the New York State Medical Society, 50 volumes of their transactions for 1859, for distribution to the Medical Press, the Medical Colleges, and all Medical Societies of the South, and sent with a request for an interchange of civilities. Gentlemen present can be supplied by application to Dr. Bemiss, and if the number sent be not sufficient for the supply they will be cheerfully forwarded to any gentlemen by application to the Secretary, Dr. S. D.

Willard, Albany, N. Y., the postage being included in the application, which is twenty-two cents.

A voluminous report from Dr. Thomas Logan, of California, on Medical Topography and Epidemics, was received, and referred to the Committee on Publication.

The Chairman of the Committee on Voluntary Essays stated that he had received a paper on a case of extra-uterine foetation from Dr. Enos Hoyt, of Transylvania, Mass., and another on a case of accidental poisoning by strychnine from Dr. Douglas Bly, of Rochester, N. Y. He also presented a very voluminous paper, entitled "Observations on some of the changes of the Solids and Fluids in Malarial Fever, by Joseph Jones, Prof. of Medical Chemistry in the Medical College of Georgia, at Augusta." By request, Prof. Jones gave a verbal abstract of his paper and an exposition of his theory; and on motion of D. W. Yandell the communication was referred to the Committee on Publication.

Dr. D. W. Yandell announced that the following railroad companies had agreed to pass delegates to this convention over their roads at half price: Pittsburgh Fort Wayne and Chicago, Pennsylvania Central, Jeffersonville, New Albany and Salem, Louisville and Nashville, and Cleveland and Pittsburgh.

On motion, a vote of thanks was tendered to these companies for their liberality.

Dr. J. B. Flint offered the following resolution:

WHEREAS, Our brethren of Great Britain are engaged in erecting a monument to the memory of John Hunter, whose invaluable services in behalf of Physiology and Surgery are recognized and honored, as well on this side of the Atlantic as in Europe; and whereas this association, as the representative of American Medicine, would rejoice in some suitable manner to participate in so grateful a testimonial of gratitude and respect; therefore—

Resolved, That a committee of three be appointed to consider in what manner this participation can best be effected, so as to be acceptable to our British brethren, and consistent with our own means and opportunities of action, with instructions to report at the next annual meeting.

The resolution was adopted; and Drs. Flint, Bowditch, and Shattuck appointed as the committee.

Dr. Harvey Lindsley offered the following:

WHEREAS, Parliamentary rules of order are numerous, compli-

cated, sometimes obscure, and often inapplicable to such a body as the American Medical Association; and whereas, from the nature of the pursuits of medical men, they cannot be familiar with these rules: Therefore—

Resolved, That a Select Committee of three members be appointed to prepare a system of rules for the government of this Association, as few in number, as concise and perspicuous as possible, to be reported to the next annual meeting.

This resolution was adopted, and Drs. Lindsley, Comegys, and Blatchford appointed as the committee.

The paper of Dr. Bly, on Accidental Poisoning by Strychnine, was read by its author; and as individual cases are not reported in the journals of the Association, thanks were returned for the communication, with a request that it be published in some medical journal.

An invitation from Grand Master Morris, of the Masons, was received, urging medical brethren to attend the Masonic Convention now in session in this city.

The Nominating Committee made the following report:

The next annual meeting to take place at New Haven, on the first Tuesday of June, 1860. Dr. Eli Ives is elected Junior Secretary.

Committee of Arrangements—Drs. Chas. Hooker, Stephen G. Hubbard, and Benjamin Silliman, Jr., with power to add to their numbers.

Committee on Prize Essays—Drs. Worthington Hooker, Conn.; G. C. Shattuck, Mass.; Usher Parsons, R. I.; P. A. Jewett, Conn.; and John Knight, Conn.

Committee on Publication—Drs. F. G. Smith, Philadelphia, Pa.; Wistar, do; Bemiss, Louisville, Ky.; Ives, New Haven, Conn.; Hollingsworth and Hartshorn, Philadelphia, Pa.; and Askew, Wilmington, Del.

Committee on Medical Literature—Drs. Henry Campbell, Ga.; D. F. Wright, Tenn.; O. Wendell Holmes, Mass.; S. G. Armer, Ohio; and W. H. Byford, Ill.

Committee on Medical Education—Drs. D. M. Reese, New York; W. R. Bowling, Tenn.; Chas. Fishback, Ind.; John Bell, Penn.; Z. Pitcher, Mich.

The following special committees were appointed:

On *Morbus Coxarius*, and Surgical Pathology of Articular Inflammation—Dr. Lewis A. Sayre, New York.

On the Surgical Treatment of Strictures of the Urethra—Dr. James Bryan, of Philadelphia.

On Drainage and Sewerage of large cities, their influence on Public Health—Drs. A. J. Semmes, D. C., Chairman, Cornelius Boyle, and G. M. Dove.

On the Periodicity of Diseases prevailing in the Mississippi Valley—Dr. J. W. Singleton, of Smithland, Ky.

On Puerperal Tetanus, its Statistics, Pathology, and Treatment—Dr. D. L. McGugin, of Keokuk, Iowa.

On Hospital Epidemics—Dr. R. K. Smith, of Philadelphia.

On Puerperal Fever—Dr. J. N. Green, of Stelisville, Ind.

On Anæmia and Chlorosis—Dr. H. P. Ayres, of Fort Wayne, Indiana.

On Veratrum Viride—Dr. James B. McGraw, of Richmond, Va.

On Alcohol, its Therapeutical Effects—Dr. J. R. W. Dunbar, of Baltimore, Md.

On Meteorology—Dr. J. G. Westmoreland, Atlanta, Ga.

On Milk Sickness—Dr. Robert Thompson, Columbus, O.

On Manifestations of Disease of Nerve Centres—Dr. C. B. Chapman, Wisconsin.

On the Medical Topography of Iowa—Dr. T. O. Edwards, Iowa.

On Microscopic Observations on Cancer Cells—Dr. Geo. D. Norris, New Market, Ala.

On the Philosophy of Practical Medicine—Dr. Chas. Graham, Cincinnati, O.

On some of the Peculiarities of the North Pacific and their relations to Climate—Dr. Wm. H. Doughty, Ga.

The following special committees were continued or altered :

On Microscope—John C. Dalton, Jr., N. Y.; David Hutchinson, Ind.; A. R. Stout, Cal; Calvin Ellis, Mass.; Christopher Johnson, Md.

On Diseases and Mortality of Boarding Schools—Dr. C. Mattingly, Ky.; and Dixie Crosby, N. H.

On the various Surgical Operations for the Relief of Defective Vision—Drs. M. A. Pullen, Mo.; T. J. Cogley, Ind.; and W. Hunt, Penn.

On the Blood Corpuscle—Dr. A. Sager, Michigan.

On American Medical Necrology—Dr. C. C. Cox, Maryland.

On the Hygienic Relations of Air, Food, and Water, the natural and artificial causes of their impurity, and the best methods by

which they can be made most effectually to contribute to the public health—Dr. C. C. Cox, Maryland.

On the Effect of Virus of Rattlesnake, &c., when introduced into the system of Mammalia—Dr. A. S. Payne, Virginia.

On the Climate of the Pacific Coast, and its Modifying Influences upon Inflammatory Action and diseases generally—Dr. O. Harvey, California.

On the Constitutional origin of Local Diseases, and the Local Origin of Constitutional Diseases—Drs. W. H. McKee, North Carolina; and C. F. Heywood, New York.

On motion of Dr. Brodie, Dr. A. J. Semmes was requested to serve as secretary pro tem. during the remainder of the session.

The association took up the special order, being the report on Medical Ethics, to which had been referred the action of the Du-buque Medical Society, which, after debate, was laid over until 12 o'clock to-morrow.

Amendments to the constitution of the Association were then taken up, and a provision was acted upon that no individual who shall be under sentence of expulsion or suspension from any State or Local Medical Society, of which he may have been a member, shall be received as a delegate to this body, or be allowed any of the privileges of a member, until he shall have been relieved from such sentence by such State or Local Society. This amendment to the constitution was adopted.

The next amendment, lying over from last year, was the proposition of Dr. Kyle, of Ohio,—

That the Constitution of the Association be so amended as to prohibit the admission as a delegate or the recognition as a member of any person who is not a graduate of some respectable medical college.

This amendment was rejected; but, on the question of reconsideration, a long and animated debate ensued, which called forth all the oratorical abilities and much of the personal feelings of the delegates. Without arriving at a vote, the Association adjourned for dinner.

The following gentlemen have been admitted to the Association as members by invitation:

Indiana—B. C. Rowan, N. D. Field, John S. Rowe, R. Curran, D. Wiley, J. A. Windle, A. V. Talbot, J. W. Davis.

Ohio—W. C. Hall, N. B. Davis.

Tennessee—J. M. Brannoch.

Kentucky—W. N. Garther, S. B. Fields, W. S. Cain, J. A. Hodge,
S. B. Merrifield, Joshua Gore, H. M. Berkeley.

Missouri—J. M. Allen.

Alabama—Dr. Bollman, Dr. Turney.

New Hampshire—David Kay.

United States Army—Charles S. Tripler.

AFTERNOON SESSION.

Upon the re-assembling of the Association, the discussion was renewed on the motion to reconsider the vote by which the amendment to the Constitution was negatived, prohibiting the admission as a delegate or the recognition as a member of any person who is not a graduate of some respectable medical college.

Dr. Kincaid moved a further amendment, to insert the word "hereafter" after "prohibiting."

Dr. Askew, of Delaware, one of the Vice Presidents in the chair, ruled the amendment out of order at the present stage, or until the Association decide upon the question of reconsideration.

After a long discussion, Dr. Davis, of Indiana, moved to lay the motion to reconsider on the table, which was carried, 97 yeas, nays not counted. So the amendment stands registered.

The next proposed amendment to the Constitution was that suggested by the New Jersey Medical Society, asking for such changes as would establish a Board of Censors in every judicial district of the Supreme Court, who should examine and grant diplomas to all proper members of the Association.

This was temporarily laid on the table, for Dr. Crosby to offer a report of the Medical Teachers' Convention, which met on Monday last. He strongly recommended a committee from this body to confer with the Teachers' committee, and felt great confidence that something beneficial to medical education would be the effect of such conference.

Dr. Comegys moved the appointment of a committee of five to confer with a committee of Medical Teachers, and report at the next annual meeting, provided that no medical teacher be selected on the part of this Association.

This again gave rise to an excited debate, clearly showing that there was a great deal of bad feeling between the Professors and the laymen of the profession. Prof. McDowell, of Missouri, was extremely happy in some of his hits, and kept his auditors in a roar of laughter. He acknowledged that Philadelphia and New York had the advantage of location; the railroads took students there as they did the horses and cattle of the west, and sometimes its asses.

Prof. Crosby, of Dartmouth College, contended that the elevation of the standard of medical education depended more upon practitioners than the colleges; if bad materials were sent up from physicians' offices for Professors to model into physicians, it could not be expected that good results would follow. He wanted a committee of conference, not based on any sectional feelings, and he believed the whole matter could be arranged satisfactorily.

Dr. D. W. Yandell wished to reply to one remark of Prof. Crosby, as to the bad materials sent by private teachers to the colleges. He had himself rejected students who were too big fools to be made physicians, and these same persons, in a few months, had gone to some of the colleges and come back with their diplomas in their pockets.

After a very eloquent, appropriate, and conciliatory speech from Dr. Davis, the resolution of Dr. Comegys was unanimously adopted.

The resolutions from the New Jersey Medical Society were then taken from the table, and referred to the committee of Conference.

Dr. Davis offered a resolution instructing the same committee to confer with the State Medical Societies, for the purpose of procuring more decisive and uniform action throughout the profession in carrying into effect the standard of preliminary education adopted by this Association at its organization in 1847. This was carried.

Dr. Gibbes, from the committee to examine into a Plan of Uniform Registration of Births, Marriages and Deaths, offered the following report:

They have given the same a careful consideration, and they unanimously recommend that the Report be adopted and referred to the committee on Publication.

They also recommend that the same committee be continued, with instructions to add to the Report, in time for publication in the ensuing volume of Transactions, a form of registration law which may be likely to answer the requirements of the several States.

Dr. Sayre, of New York, offered the following :

WHEREAS, The medical profession at large have an interest in the character and qualifications of those who are to be admitted as their associates in the profession ; therefore,

Resolved, That each State Medical Society be requested to appoint annually two delegates for each college in that State, whose duty it shall be to attend the examination of all candidates for graduation ; and that the colleges be requested to permit such delegates to participate in the examination and vote on the qualifications of all such candidates.

This was referred to the Committee of Conference.

The paper of Dr. Jones, presented at the morning session, was taken from the Committee on Publication, and referred to the Committee on Prize Essays.

Dr. Eve moved to record the name of Dr. Benj. W. Dudley as a permanent member ; which was adopted by a unanimous vote, the delegates all rising to their feet in token of respect.

Adjourned till to-morrow morning.

The following members of the Association registered their names during the day :

Indiana—John M. Kitchen, S. Davis, Geo. W. New, J. H. Woodburn, S. M. Linton, C. Brown, A. G. Boynton, F. M. Mothershead, T. Bullard, W. W. Hitt, A. J. Mullen, Jno. M. Hinkle, J. D. Maxwell, Jno. M. Reily, J. A. Windle, B. C. Rowan, L. Ritter, R. Curran, J. W. Davis, W. T. S. Cornett, A. V. Talbert.

Missouri : J. M. Allen, E. S. Frazer.

Iowa : Wm. Watson.

New York : Daniel G. Thomas, John L. Zabriskie, M. M. Marsh.

Alabama : J. N. Turney.

Pennsylvania : W. W. Townsend, Caleb Swaine.

Ohio : Geo. Mendenhall, S. G. Armor, E. B. Stevens, L. G. Lecklider, W. L. Schneck, J. P. Judkins, D. B. Cotton, W. F. Kincaid, Jno. Davis, W. C. Hall, W. B. Davis, P. H. Kelly, Usher P. Leighton.

United States Army : Charles S. Tripler.

Kentucky : E. O. Brown, S. B. Richardson, A. H. Shively, F. G. Montgomery, J. A. Hodge, W. W. Cleaver, Hugh Berkley, S. B. Field, W. N. Garther, Ed. Richardson.

Illinois : F. B. Haller, H. Nance, Thomas Wilkins, T. D. Fitch, C. Johnson, D. O. McCord.

Tennessee: J. M. Brannoch.

The whole number of delegates in attendance is therefore 301, exclusive of members by invitation.

SECOND DAY'S PROCEEDINGS.

THURSDAY, May 5th, 1859.

The President called the Association to order at 9 o'clock, and the reading of the minutes of yesterday was dispensed with.

The first business in order was an amendment to the Constitution, laid over from last year, and proposed by Dr. T. L. Mason, of New York, to insert in the first line of the second paragraph of Article 2, after the words "shall receive the appointment from," the words "any medical society permanently organized in accordance with the laws regulating the practice of physic and surgery in the State in which they are situated, and consisting of physicians and surgeons regularly authorized to practice their profession." Also, to add to the sixth paragraph of the same article the words "but each permanent member of the first class designated in this plan of organization shall be entitled to a seat in the Association, on his presenting to this body a certificate of his good standing, signed by the Secretary of the Society to which he may belong at the time of each annual meeting of this body.

Dr. Linden A. Smith, of New Jersey, said that amendments to the Constitution should be adopted with care, and though, perhaps, that now proposed might be desirable, still as Dr. Mason who had proposed it, was not present to explain his views, he moved that the subject be laid over until next year. This suggestion was adopted.

Another constitutional amendment, proposed by Dr. Henry Hartsorne, of Pennsylvania, and laid over from last year, under the rules, provides to add to the second article the words: "No one expelled from this Association shall at any time thereafter be received as a delegate or member, unless by a three-fourths vote of the members present at the meeting to which he is sent, or at which he is proposed."

This amendment was adopted.

Another amendment proposed by J. Berrien Lindsley, of Tennessee, was called up, to omit in Article 2 the words "medical colleges, hospitals, lunatic asylums and other permanently organized medical institutions in good standing in the United States," and also to omit the words: "The faculty of every regularly constituted medical college or chartered school of medicine shall have the privilege of

sending two delegates. The professional staff of every chartered or municipal hospital containing an hundred inmates or more shall have the privilege of sending two delegates, and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate."

This was laid on the table until the next annual meeting.

An invitation was received from Mons. Groux, requesting the delegates to meet him at the hall of the University at noon to-day, to witness experiments on his congenital fissure of the sternum; which was deferred until four o'clock this afternoon, as the Association had previously accepted the hospitality of Mr. and Mrs. Robert J. Ward at the former hour.

Dr. McDermot submitted the following resolutions:

WHEREAS, A vast proportion of the disease and misery that afflict our race is caused by the excessive use of intoxicating liquors; and whereas, in the opinion of this Association, the evils of intoxication can be most effectually remedied by the establishment of Inebriate Asylums, wherein the victims of intemperance may be subjected to such restraints and treatment as shall effect a thorough reformation of their habits; therefore,—

Resolved, That this Association recommend the establishment of Inebriate Asylums in the various States of the Union.

Resolved, That the State and County Medical Societies, and all members of the medical profession, be requested to unite in diffusing among the people a better knowledge and appreciation of the beneficent purposes and important benefits that would be conferred upon society by the establishment of such Asylums throughout the various sections of the country.

This resolution was referred to the mover, as a special committee, with a request that he would report thereon at the next meeting of the Association.

Dr. Shattuck offered the following, which was adopted:

Resolved, That the committee appointed in May, 1857, on Criminal Abortion, be requested to continue their labors, and especially to take all measures necessary to carry into effect the resolutions reported by them on the first day of the meeting.

Dr. Yandell, from the Committee on Voluntary Essays, made a further report that a communication had been received from Dr. Langer, of Iowa, on Subcutaneous Injections as remedials; which, on motion, the author read.

The essay was referred to the writer as a special committee, with the request that he would report further at the next annual meeting of the Association, and continue his investigations.

Invitations to visit the Insane Asylum, and the Library and Museum of Transylvania University, were received.

The President appointed, as the committee of conference to meet the committee from the Teachers' Convention, the following gentlemen: Drs. Blatchford, Troy, N. Y.; Condie, Philadelphia, Pa.; Bozeman, Montgomery, Ala.; Brodie, Detroit, Michigan; and Sneed, Frankfort, Ky.

Dr. D. Meredith Reese, from the Nominating Committee, made the following final Report:

Special Committees continued:

On Quarantine—Drs. D. D. Clark, Penn.; Snow, R. I.; Jewell, Penn.; Fenner, La.; and Houck, Md.

On Medical Ethics—Drs. Schuck, Penn.; Murphy, Ohio; Linton, Mo.; Powell, Ga.; Eve, Tenn.

On Tracheotomy in Membranous Croup—Dr. A. V. Dougherty, New Jersey.

On the Effects of Lithotomy, Performed in Childhood, upon the Sexual Organs in After Life—Dr. White, Memphis, Tenn.

On Mercurial Fumigation in Syphilis—Dr. D. W. Yandell, Louisville, Ky.

On the Improvements in the Science and Art of Surgery, made during the last Half Century—Dr. Jos. McDowell, St. Louis, Mo.

On the Cause and Increase of Crime and its Mode of Punishment—Dr. W. C. Sneed, Frankfort, Ky.

On the Education of Imbecile and Idiotic Children—Dr. H. P. Ayres, Fort Wayne, Ind.

On the Uses and Abuses of the Speculum Uteri—Dr. C. H. Spillman, of Kentucky.

On the Topography of Vermont—Dr. Perkins, of Vermont.

On the Pons Varolii, &c.—Dr. S. B. Richardson, of Kentucky, and Dr. Fishback, of Indiana.

On the Physical Effects of the Hydro-Carbons—Dr. F. W. White, of Illinois.

On the Effect of Periodical Operations for Urinary Calculi upon Procreation in the Male—J. S. White, of Tennessee.

The paper from Dr. Ellis, of Massachusetts, on the subject,

“Does the microscope enable us to make a positive diagnosis of Cancer, and what if any are the sources of error?” was referred to the special committee on the microscope, of which Dr. Dalton is chairman.

Honorary resolutions were passed to the memory of the following members of the Association, deceased: Dr. W. W. Bowling, of Alabama; Dr. Thomas D. Mutter, of Penn.; Dr. P. C. Gaillard, of S. C.; Dr. Jabez G. Goble, of New Jersey; Dr. John K. Mitchell, of Penn.

Dr. R. K. Smith, of Philadelphia, submitted the following:

Resolved, That the death of Dr. John K. Mitchell, one of the members of this Association, has been to this body a loss keenly felt by every man who knew him. His eminence as a teacher, his varied acquirements in every department of learning, and his generous social qualities in every relation, endeared him to every member of the profession who had the pleasure of his personal acquaintance.

Resolved, That the family be notified of the action of this Association.

Other more formal resolutions were offered and feeling eulogies pronounced.

Dr. Sayre offered the following, which were adopted by acclamation:

Resolved, That the thanks of the American Medical Association are eminently due and are hereby presented to the citizens of Louisville, Ky., for the princely hospitality publicly and privately extended to the members of this body during its present session.

Resolved, That to the Committee of Arrangements, and to the profession of Louisville generally, our thanks are due for their kind and assiduous attention to the Association and for the hearty welcome with which they have greeted our convention in their flourishing city.

After the transaction of some other unimportant routine business,

On motion of Dr. Davis, the Association adjourned, to meet at New Haven on the first Tuesday in June, 1860.

The registration book during the day announced the names of Drs. D. G. Thomas, of New York; William S. Cain, of Kentucky, and Peter Allen, R. K. McMeans, and W. R. Kable, of Ohio—making 305 members in attendance during the session of this Association.

Annual Meeting of the Ohio State Medical Society.

The Fourteenth Annual Meeting of the State Medical Society, commenced June 7, in the room of the Supreme Court, State House. Forty-two members present.

The meeting was called to order, in the absence of the President, Dr. Hurxthal, by Dr. L. Firestone, of Wooster; Drs. A. Metz and H. M. McAbee appearing as Secretaries.

The meeting was opened with prayer by the Rev. Mr. Morris.

LIST OF MEMBERS PRESENT.

L. Firestone, Wooster; Jas. Bronson, Newton Falls; J. S. Risinger, Galion; L. Slusser, Canal Fulton; W. L. McMillen, Columbus; J. W. Hamilton, Columbus; J. G. Kyle, Xenia; S. M. Smith, Columbus; John Davis, Dayton; R. Gundry, Dayton; H. M. McAbee, Massillon; G. F. Mitchell, Mansfield; G. E. Eels, Columbus; Robt. Thompson, Columbus; J. B. Thompson, Columbus; B. F. Welsh, Madison Co.; S. Loving, Columbus; A. Metz, Massillon; W. W. Dawson, Cincinnati; G. J. Sachse, Columbus; John Dawson, Columbus; C. Robertson, McConnellsville; C. P. Landon, Westerville; R. R. McMeens, Sandusky; B. S. Brown, Bellefontaine; S. P. Hunt, Morrow; J. Campbell, Belmont Co.; G. M. Boyd, Xenia; L. Galpin, Milan; P. Canedy, Nicholasville; J. W. Wilson, Fremont; M. Dawson, Fairfield Co.; H. W. Darwin, Gettysburg; R. N. Barr, Columbus; S. W. Crew, Batavia; J. C. McBeth, Galion; A. Robb, Dodsonville; Joel Pomerene, Mt. Hope; H. L. Donham; Wm. A. Johnson, Morrow; W. W. Bridge, Marion; F. C. Applegate, Portage Co.; Z. F. Guerin, Franklin Co.; T. A. Reamy, Hopewell; B. B. Leonard, West Liberty; R. F. Sweney, Marion; Geo. Maris, Columbus; C. W. H. Mahlman, Columbus; T. M. Cook, Monroeville; S. S. Scoville, Clermont Co.; J. L. Drake, Lebanon; J. H. Rogers, Springfield; Wm. J. Scott, Shadeville; M. Thompson, Mt. Vernon; J. W. Russell, Mt. Vernon; E. B. Stevens, Cincinnati; A. S. Williams, W. F. Dean.

Dr. J. B. Thompson, of Columbus, from the Committee of Arrangements, read a report fixing the order of business of the Convention, which was adopted.

On motion of Dr. Slusser, reporters for city papers were admitted within the bar of the hall.

The Committee on Admissions, reported the following names for admission into the Society ; which report was adopted :

F. C. Applegate, of Portage co. ; R. F. Sweney, of Marion ; H. W. Daron, of Gittisburg, Darke co. ; J. N. Beach, of Jefferson, Madison co. ; L. C. Fauts, of Eaton ; Dr. Drury, of Columbus ; Dr. Pearce, Secretary of Jefferson Medical Society ; W. W. Bridge, of Marion ; J. W. Wilson, of Fremont, Sandusky co. ; M. Cook, of Monroeville ; C. H. W. Mahlman, of Columbus.

The election of officers for the ensuing year, being in order, on the second ballot Dr. L. Firestone, of Wooster, was declared elected President, he having received 26 votes—the whole number of votes cast, 40.

Dr. Firestone arose and delivered a very neat, brief and appropriate address, which was received with applause.

The Convention then proceeded to elect four Vice Presidents. On the first ballot, Dr. B. S. Brown, of Bellefontaine ; on the second ballot, Dr. Charles Robertson, of McConnelsville ; on the third ballot, Dr. John Davis, of Dayton ; and on the fourth ballot, Dr. James Bronson, of Newton Falls, were declared elected.

The Convention then proceeded to elect two Secretaries for the ensuing year ; and on the first ballot, Dr. R. Gundry, of Dayton ; and on the second, Dr. W. W. Dawson, of Cincinnati, were elected Secretaries.

The Convention then proceeded to elect a Treasurer ; and on the first ballot, Dr. John B. Thompson, of Columbus, received a majority of all the votes cast, and was declared duly elected.

Dr. Gundry resigned the office of Secretary, and Dr. A. Metz was elected in his place.

The Committee on Admissions reported the following gentlemen, who were admitted : Dr. B. E. Welch, of California, Madison co. ; Dr. J. L. Drake, of Lebanon ; W. A. Johnson, of Morrow ; Dr. Dawson, of Carroll, Fairfield co. ; Dr. S. S. Scoville, of Bethel, Clermont co. ; and Dr. A. Robb, of Highland co.

The Convention proceeded to vote for a Librarian, and on the first ballot Dr. Robert Thompson, of Columbus, was unanimously elected.

The following gentlemen were elected Committee on Admissions for the ensuing year : Drs. Eels, Mitchell, Pomerene, Slusser and Sweney.

The Convention then took a recess till half past two o'clock.

AFTERNOON SESSION.

The convention met at 3 o'clock and the minutes of the morning session were read.

The Chair announced the following standing committees for the year:

On Publication—Drs. S. Loving, R. Gundry, W. W. Dawson, W. L. McMillen and R. Hills.

On Finance—Drs. R. N. Barr, T. M. Cooke, A. Metz, E. B. Stevens and C. F. Applegate.

On Medical Societies—Drs. J. F. Mitchell, G. E. Eells, T. J. Mullen, W. Morehead, D. B. Woods.

On Ethics—Drs. C. P. Landon, B. B. Leonard, W. M. Prentiss, J. C. Rogers, J. G. Kyle.

Dr. Robert Thompson gave notice of his intention of presenting several papers upon medical topics for the consideration of the convention.

The report of the Treasurer of the Society was referred to the Committee on Finance, by which it appears that there is a balance of \$210 in the Treasury.

A letter was read from Dr. N. B. Wright, of Cincinnati, stating that he will be here on Wednesday evening to deliver an address upon the subject of "Drunkenness, its nature and cure, and the establishment of asylums for inebriates."

A memorial from the Toledo Medical Association was read, asking the influence of the Society for a law protecting physicians, which was referred to the Committee on Medical Societies.

A paper by J. G. Kyle, of Xenia, on Epilepsy, was announced.

A letter from Prof Kirtland, of Cleveland, submitting two papers for the consideration of the Society, was read.

On motion, the reading of Dr. Gundry's papers on "Insanity," was made the order of the day for Wednesday morning.

Dr. Metz, of Massillon, from the committee, read an able paper upon the subject of Obstetrics, which was referred to the Committee on Publication.

Dr. Barr, from the Finance Committee, submitted a report stating that the accounts of the Treasurer, which were examined, were correct.

Dr. Eells read an invitation to the convention from the members of the Society to a banquet at the Neil House, on Wednesday even-

ing. Also, an invitation from Mr. Wilson, of the Ohio White Sulphur Springs, to visit that place on Thursday, and extending the hospitalities of his establishment. An invitation to visit the Central Ohio Lunatic Asylum was read.

Dr. Kyle read an abstract of his paper upon "Epilepsy," which was subsequently referred to the Committee on Publication.

Dr. Maris, of Columbus, introduced a letter from Dr. Hamilton, referring to a personal matter between them, which Dr. Maris hoped would receive the attention of the Society. The letter was referred to the Committee on Ethics.

The convention then adjourned to eight o'clock.

EVENING SESSION.

The meeting was called to order by the President.

Dr. Hamilton, from the Committee on Surgery, stated that he would be prepared to make a report on Wednesday.

Dr. Landon, from the Committee on Obituaries, stated that but one member of the Society had died during the year, Dr. Ackley, of Cleveland, and their committee was as yet unable to get the material for an extended report, but hoped to be able to do so before the Society adjourned.

Dr. Bronson read an interesting paper on Empyema, which was referred to the Committee on Publication.

On motion, the convention adjourned to nine o'clock, Wednesday morning.

SECOND DAY—MORNING SESSION.

The Society was called to order at nine o'clock, by President Firestone.

The Committee on Admissions reported the following new members, who were duly admitted: A. Braden Carey, Hamilton county; W. C. Hall, Fayetteville, Brown county; F. C. Sharp, Williamsburg, Clermont county.

The Society proceeded to the special order of the day, which was the reading of a lengthy paper on "Insanity," by Dr. Gundry, of Dayton.

On motion of Dr. Hills, Prof. Sanford, of Iowa, was invited to take a seat in the convention and participate in its deliberations.

An invitation was read from the Superintendent of the Idiotic Asylum, asking a visit from the Society at any time between the hours of 9 and 12 o'clock, A. M.

Dr. Robert Thompson, of Columbus, read a paper upon the subject of "Cataract," and other diseases of the eye, which was referred to the Committee on Publication.

On motion, the Society took a recess.

AFTERNOON SESSION.

The Society met at 2 o'clock, the President in the chair, and the minutes of the evening and morning sessions were read and approved.

The chairman of the Committee on Medical Societies reported the following, which was adopted :

Resolved, That the Delemater Medical Association of Norwalk and vicinity, and the Jefferson County Medical Society, be recognized as auxiliary to the Ohio State Medical Society.

The Committee on Admissions nominated Andrew Sabine, of Columbus, as member of the Society, which nomination was confirmed.

Dr. R. G. McLean offered a resolution giving the Committee on Publication discretionary power to publish such papers as they see proper, except when they are specially instructed to print.

Considerable discussion arose in regard to this resolution, which was finally lost.

The Secretary read the paper of Prof. Kirtland, of Cleveland, upon the subject of the use of mercurials, which was referred to the Publication Committee.

On motion of Dr. Scott, a Committee of three was appointed to report on diseases of the Urinary organs.

Dr. Baker, of Cincinnati, moved that when the Society adjourns, it adjourn to meet at the Ohio White Sulphur Springs, on the —— day of June, 1860, which was agreed to.

Dr. J. W. Hamilton read a paper upon the subject of Ovariectomy in Ohio, which he illustrated with specimens. The paper was referred to the Committee on Publications, with instructions to print.

The following was adopted :

Resolved, That when any Committee shall ask further time to report, and fail to do so, said Committee shall be discharged from the further consideration of the subject referred to, and another Committee appointed.

The Committee on Ethics, in reference to the charges preferred by Dr. Maris against Dr. Hamilton, reported that the conduct of Dr. Hamilton was that of a high minded and honorable man.

On the pending of a motion to adopt the report, Dr. Maris made a touching appeal to the Society to protect him from injustice done him by the Committee. This appeal was seconded by Drs. Wright, Baker and R. Thompson, and responded to by Dr. Hamilton by a full statement of the matter pending, whereupon, after explanatory remarks from Drs. Wright and Baker, a vote was called for by the latter gentleman, and the report unanimously adopted.

The Society then took a recess till eight o'clock, to meet at Armory Hall.

In the evening, the members of the Society, with many others, listened to the lecture of Dr. Wright, at Armory Hall, after which they enjoyed a banquet at the Neil House, prepared by the members of the Society in this city.

THIRD DAY—MORNING SESSION.

The Convention met at nine o'clock. The minutes of the previous meeting were read and approved.

The Committee on Admissions recommended Dr. J. T. Houston, of Jamestown, Greene county, and Dr. John A. Carothers, of Killbourn, Delaware county, which nominations were confirmed by the Society.

Dr. Bronson read a paper which was referred, with instructions to print.

Dr. H. M. McAbee moved that the Publishing Committee be instructed to print the papers of Dr. Gundry on "Insanity," and Dr. Metz on "Obstetrics." The motion was amended by adding that all papers referred to the Committee be published. The amendment was lost, and the motion of Dr. McAbee prevailed.

On motion, the papers of Dr. Thompson were ordered to be printed.

Dr. Hamilton offered the following, which was adopted:

Inasmuch as Prof. R. D. Mussey, from its origin, a member of this Society, is, on account of age and infirmity, now resident in a distant city, and disqualified for active duty in the profession; therefore,

Resolved, That in respect to his distinguished character, we

request him to allow the Society to abate his assessments and continue his membership, and that the Secretary is hereby instructed to inform Prof. M. of this action.

On motion, the Publishing Committee was instructed to publish 3,000 copies of Dr. Wright's address upon "Drunkenness" in pamphlet form for general distribution.

Dr. Hamilton offered the following which was adopted :

Resolved, That a committee of three be appointed for the purpose of taking into consideration a plan to be adopted by the Society for the annual and regular distribution of prizes for meritorious essays.

Dr. Hamilton offered the following resolutions, which were adopted :

Resolved by the State Medical Society, That a committee of three be appointed to confer with the Commissioners of the State Library and the appropriate committee of the next Legislature of the State, and use such other means as in their discretion may seem necessary for the purpose of securing a medical department in the State Library.

Resolved, That said Committee of this Society as a nucleus for said department of said State Library, be instructed to endeavor to secure an appropriation, to be placed at the disposal of the State Librarian, sufficient to secure complete sets of all the medical periodicals currently or formerly published west of the Alleghenies. Also complete sets of the proceedings of the American Medical Association, the American Journal of the Medical Sciences, the North American Medico Chirurgical Review, the London Lancet and London Medico Chirurgical Review, in the order herein specified.

Resolved, That the Librarian of this Society is hereby instructed to procure three full sets of the proceedings of the Ohio Medical Conventions ; also three full sets of the proceedings of this Society ; also a full set of the proceedings of the State Medical Society of each State where the same can be procured by exchange, have the same bound when necessary, and present the same on behalf of this Society to said Medical Department of the said State Library.

On motion of Dr. Robert Thompson, the thanks of the Convention were unanimously tendered to the officers of the Convention for the courteous, able and impartial manner in which they had discharged the duties of their offices.

On motion of Dr. Landon, the thanks of the Convention were tendered to the newspaper reporters and publishers for their reports of the proceedings of the Society.

On motion, the Convention adjourned to meet in the afternoon at the Ohio White Sulphur Springs.

The following special committees were announced :

Surgery—A. H. Baker, T. G. Garlick, A. Carey.

Medical Literature—E. B. Stevens, H. J. Donahoo, J. Drake.

Practice—W. J. Scott, J. B. Potter, M. Thompson.

Obstetrics—M. B. Wright, J. H. Rogers, S. P. Hunt.

Obituaries—C. P. Landon, C. C. Hildreth, J. V. Schertzer.

Prize Essays—S. G. Armor, C. McDermot, W. H. Lamme.

Library—J. W. Hamilton, J. Helmick, J. C. Thompson.

Can. Indicus—R. R. McMeans, W. P. Kincaid, C. P. Landon.

Ovarian Disease—J. W. Hamilton, W. H. Mussey, G. V. Dorsey.

Amendments to Registration Law—John Dawson, S. M. Smith, J. L. Vattier.

Urinary Diseases—W. J. Scott, R. G. McLean, — Senter.

Diseases of the Eye—A. Metz.

New Remedies—J. J. Delamater.

Anæsthetics—S. Loving.

Uterine Diseases—S. M. Smith.

Typhoid Fever—J. Pomerene.

Delegates to Pharmaceutical Association—M. B. Wright, R. Thompson, J. Harman.

Delegate to Indiana State Medical Society—E. B. Stevens.

Delegate to Kentucky State Medical Society—J. D. Robinson.

At eight o'clock, P. M., the Society had a meeting for business at the White Sulphur Springs.

On motion, the blank in the above resolution of adjournment was filled with the second Tuesday of June.

On motion of Dr. Hamilton, the following resolutions were unanimously adopted :

Resolved, That we hereby intimate our gratitude to A. Wilson, Esq., the urbane and gentlemanly proprietor of the "Ohio White Sulphur Springs," for his boundless hospitality and liberality, as exhibited in the princely banquet tendered this Society.

Resolved, That as citizens of Ohio, and conservators of the public health, we realize the greatest satisfaction in contemplating the ample and admirable arrangements for recreation, the promotion of health, and the cure of disease, which his enterprise and liberality have placed in our midst.

Resolved, That in the rare healthfulness of the locality, its varied and delightful scenery, its four varieties of mineral and medicinal waters, provided by a beneficent Providence, in such abundant and unfailing supplies, we have a combination of hygienic and medicinal facilities, challenging comparison with the best watering places of the country and of the world.

Resolved, That we most cheerfully recommend the "Ohio White Sulphur Springs," to the seekers of pleasure, recreation or health, as affording the most ample and desirable facilities for the attainment of these ends.

Resolved, That the papers of the State be requested to publish these resolutions.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

ON AN IMPERFECTLY-KNOWN FUNCTION OF THE PANCREAS, VIZ : DIGESTION OF NITROGENOUS FOOD.

General Propositions, forming the Summary of an Essay published with the above title and read before the Academy of Medicine of Paris ; the first part in 1857, and the second in February, 1858. BY L. COVISART, M.D.

Very little is known about the manner in which animal or nitrogenous food is digested in the *bowel* ; and science has not advanced one step since the discovery of Purkinje and Pappenheim (1836) respecting the dissolving action which the pancreatic juice may exercise on such food—a discovery which has indeed remained almost unnoticed.

The pathological and experimental investigations on the *second digestion* (intestinal digestion), of which I have given an account (in the before-mentioned essay), have led to the following important

results : These are two fold : One group, of a physiological and direct character, are deduced from actual experiments. The other, of a pathological and indirect nature, are deductions or corollaries, which, as it seems to me, throw some light on clinical medicine.

I.—*Physiological Propositions.*

1. Nitrogenous food is digested both by the stomach and the pancreas.

2. The pancreas is, as it were, a supplementary organ, whose action after copious meals, is added to that of the stomach.

3. Both digestions are of the same nature, as any article of food subjected to either is transformed into the self-same nutritive product (albuminose or peptone).

4. The pancreatic juice has peculiar reactions under the influence of heat or certain agents, which reaction *the gastric juice does not present*. As this difference in the juices is found when they are both charged with peptones, after digestion, it has erroneously been supposed that the peptones also differed. This pardonable error, being pointed out, will hardly again be fallen into.

5. When an article of nitrogenous food, or a portion of it, has undergone a thorough gastric digestion, the pancreatic juice no longer acts upon it, and does not transform it into another peptone.

6. The pancreatic juice is intended to act upon that part of albuminoid substances which has left the stomach before being transformed into albuminose.

7. The amount of action of the pancreas may, in certain cases, be equal to that of the stomach.

8. If the mere quantity of secreted fluid were alone taken into account, the stomach might be looked upon as the more powerful, for the gastric juice is ten times more abundant than the pancreatic juice ; but the latter is, to make up the difference, ten times richer in ferment (pancreatine).

9. The gastric juice has the advantage of a prolonged contact and stirring with the food ; but the pancreatic juice has, on the other hand, the faculty of acting upon azotized aliments equally well, either in an alkaline, neutral, or acid state ; it also acts three times quicker than the gastric juice.

10. Everything is so disposed in the duodendum, that the pancreatic juice acts immediately after it comes in contact with the food ; and everything is so arranged in the stomach that a large part of the food is transformed into peptone, the remaining part being, at the very least, so prepared, as rapidly to undergo the pancreatic digestion.

11. This preparation, which varies according to the quality and quantity either of the food or the gastric juice, &c., consists sometimes in a dissevering or an extreme division, and sometimes in a solution. Pancreatic digestion, being forcibly very rapid, is usefully assisted by this preparation, the stomach acting respecting the pan-

creas in the same manner as the teeth do representing gastric digestion.

12. It is, however, to be noticed that the pancreatic juice is able to accomplish, unassisted, the digestion of food which has not been subjected to that gastric preparation or division; in the same way as the gastric juice can digest food without extraneous help. Hence, pieces of albuminoid substances, being *directly* placed into the intestine in a raw state—that is to say, without any preparation—are perfectly and completely digested, the process being, however, somewhat slow. The pancreatic juice can, by its own unassisted energy, carry on the digestion of nitrogenous food, without requiring the adjunction either of the intestinal juice or the bile, to gain digestive properties. The digestion of azotized food, performed in glass jars over the water bath, by means of the pancreatic juice or isolated pancreatine, goes on in the same manner as in the duodendum.

13. When the gastric and pancreatic juices are separated, and act in succession, each performs its function completely, and the quantity of albuminose produced may thus be doubled.

14. But it is a remarkable fact, that when these two digestive ferments meet in a state of purity, the two digestions are no longer freely carried on. The mixture, far from doubling the produce, may reduce it to nought, for pepsine and pancreatine destroy each other under these non-physiological circumstances.

15. Nature, in the normal state, prevents this conflict by three distinct means—1stly, by the pylorus, which separates the two ferments; 2ndly, by the very gastric digestion through which pepsine exhausts and abolishes itself in the formation of peptone; 3dly, by the bile which destroys the activity of the gastric ferment, as has been shown by Pappenheim.

16. Bile does not precipitate the peptone produced by the influence of the stomach so as to destroy digestion and necessitate its being again begun. On the contrary, the bile itself is precipitated by the acid of the gastric juice or of the chyme.

17. The nature of the nitrogenous food has much to do with the quantity of peptone which the two successive digestions can produce for the requirements of the economy. I have thus found in my experiments, that whilst muscine and caseine yield almost one ounce of perfect peptone, albumen, or gelatinous textures, though given in the same quantity, yielded hardly half an ounce.

18. At the outset, gastric or pancreatic digestion destroys the most characteristic properties of the various albuminoid substances. It liquifies insoluble ones, deprives albumen of its coagulability, and caseine of its property of coagulating by rennet. It also deprives gelatine of its property of turning into jelly, and muscine of being precipitated by chloride of sodium, &c. In short, it transforms all the substances into albuminose and peptone.

The different kinds of albuminose, although their individual reactions are much less marked than those of the albuminoid substances whence they are derived, have, nevertheless, distinct characters.

19. The nature of peptones varies as the nitrogenous substances

from which they are derived. This variety satisfies the different (plastic?) requirements of the economy.

20. The peptones which are most alike and most difficult to distinguish from each other, are, the albumen-peptone, masculine-peptone, and strange to say, gelatine-peptone; just as if the articles of food from which these peptones are derived were less different from each other than is generally supposed. Fibrine-peptone and casine-peptone are more easily distinguished from each other, and from the substances above named. From the slight differences existing between azotized articles of food, or peptones, there arises a kind of unstable equilibrium, favorable to the work of assimilation performed by the tissues of the body.

21. The generic character of peptones is, that they are always soluble in water, be the latter acid, neutral, or alkaline, which circumstances secures an easy circulation in the organism. Heat does not coagulate peptones, and hardly any of them are precipitated by acetate of lead. Besides, they resist insoluble metallic combinations a great deal better than nitrogenous articles of food.

22. Peptones form a genus, as well defined as the albuminoid genus. It is, however, evident, that by the progress of science their nature will eventually be more exactly determined than can be done at the present period.

23. Some physiologists persist in the erroneous belief that the stomach merely swells or divides the food without dissolving it. How can they, however, withstand the testimony of the scales, which plainly show that, even where the weight of the food is considerable, every albuminoid article of food subjected to the action of the stomach is not merely divided, but dissolved, passes through the filter, and is absorbed by the membranes!

24. Others have maintained that the gastric juice, acting on nitrogenous food produces only gelatine. They, however, lose sight of the fact, that the characters which place gelatine in a peculiar albuminoid class, have never been discovered in the chyme after a digestion of fibrine, caseine, masculine, or albumine, even when the chyme was neutralized; and that, moreover, gelatine itself completely loses its specific characters, in consequence of undergoing digestion in the gastric juice.

25. Others, finally, resting on the hypothesis, that the albumen of the blood is nothing but the digested matters themselves, maintain that the peptones are reduced to albumen, by losing their acidity—viz: by being neutralized. Such an error can hardly exist, except albumen and fibrine be alone taken into account, excluding all other aliments; as an incomplete digestion of the albumen and fibrine may lead to confusion. Crude albumen, in fact, always partly escapes gastric digestion; ill-digested fibrine is transformed into albumen only (caseiform;) these two cases excepted, if experiments be made on the produce of concrete and washed albumen, of caseine, masculine, or gelatine, regularly digested by the stomach, no doubt can any longer be entertained. These gastric peptones never contain any albumen.

26. The peptones, either received or produced by the pancreatic juice, do not, any more than the latter, form any new albumen, and whether they be primarily or consecutively acid, alkaline, or neutral, do not increase by an appreciable weight the coagulable albumen which the pancreatic juice, pure and without peptone, *normally contains*.

27. During the three hours which follow a meal, when digestive solution, transformation, and absorption are not much advanced) the blood of the vena portæ (compared to the venous blood generally) does not become charged with a noticeable quantity of nitrogenous matter through digestive absorption; whilst on the other hand, the elements of the blood, globules and fibrine, become changed into albumen (caseiform) by a commencement of digestion, either in the intestines or the water-bath under the influences of the alkaline pancreatic juice.

28. Now, if it be considered that, during the first three hours of digestion—1stly, the pancreatic juice poured into the duodenum remains therein in a pure and active state; 2ndly, that this juice can pass into the vena portæ, (for absorption by the mesenteric veins is not suspended;) 3rdly, that this same juice can act in such an alkaline medium as the blood—if, moreover, it be considered that during those very three hours, a large portion of the globules and fibrine of the blood of the vena portæ is, weights remaining equal, transformed in that vein into albumen, (which is a commencement of transformation similar to that which they would have undergone in the intestine under the influence of this same pancreatic juice,) we can hardly refuse our assent to the hypothesis *true intra-venous digestion*, which hypothesis I confidently put forward.

29. No actually differential character has ever been pointed out between the nitrogenous matters which go by the name of extractive, and the albuminose which is generated by gastric or pancreatic digestion. Now, it should be noticed that the lacteals, *the vena portæ, and the hepatic veins, which are its continuation*, or, in other words, the vessels which most directly receive the product of digestion—are by far richer in extractive matter (albuminose) than the rest of the blood. It may, moreover, be noted that they are also richer in glucose.

30 The nutritive richness of the hepatic vessels (albuminose and glucose being contained in them) may be explained by the gastro intestinal absorption, to which is energetically added prolonged intra-venous digestion, although the liver has no share in the process.

II.—Corollaries, vel Pathological Deduction.

A. We may take it as almost certain that there exists (as regards albuminoid aliments) a duodenal dyspepsia, caused by the vitiation, insufficiency or absence of the pancreatic juice, the symptoms of which appear only from the second or third hour of digestion, with a deeper seated pain than is felt in gastric dyspepsia.

(See Propositions 1, 2, 3, 6, 7.) The internal use of pancreatine is indicated* in cases of pancreatic duodenal dyspepsia.

B. Secondary duodenal dyspepsia may be the result of an almost total absence of that kind of division which food, under the least favorable circumstances undergoes, by means of the gastric juice before that food has been transformed into peptone. Pancreatic digestion is then slower, just as gastric digestion is slower, when the teeth have not duly performed their functions. This secondary pancreatic dyspepsia may be cured by the treatment suited to the primary gastric dyspepsia.

C. Another secondary duodenal dyspepsia may arise, either from an excess of gastric juice, or from a patency of the pylorus; for in these two individual cases the gastric juice reaches the duodenum in unfortunately retaining all its active properties, which latter are prejudicial to the action of the pancreatic juice. (See Propositions 13, 14, 15 and 16.)

D. A third duodenal dyspepsia may arise from deficient biliary secretion, this deficiency being followed by the same unpleasant effects as are noticed in the two preceding cases, on account of the non-destruction of the activity of the gastric juice in the duodenum.

E. A peculiar kind of dyspepsia, which might be called of the portal vein, or hepatic, may arise from the vitiation of the intravenous digestion.

F. Certain symptoms of dyspepsia, gastralgia, enteralgia or hepatalgia, may erroneously be attributed to the stomach, the intestine or the liver; these symptoms may simply be the result of the absorption of the too abundant, too active, or too irritating pancreatic juice by the vena portæ.

G. Bile, when it reaches the stomach, destroys the activity of the gastric juice within that organ, whether it penetrates the cavity pathologically through the pylorus or by the mouth and cardia. The knowledge of this fact may lead to the employment of bile to counteract the morbid superabundance of the gastric juice.

H. The economy is supplied with a variable weight of peptone, through the weight of different kinds of nitrogenous articles of food and digestive force remained the same, the weight of the peptones varying according to the kind of nitrogenous food. It is a great error in hygienics to esteem the trophic, or nourishing power of a nitrogenous article of food, simply by the amount of nitrogen it con-

*Last year Dr. Corvisart made some clinical experiments on the therapeutic use of pure pancreatine. The difficulties he met with are recorded in the *Gazette Hebdomadaire* of Paris, May, 1857, pp. 321, 322. Dr. G. Harley, who read a paper on Digestion (just twelve months after the above date) at the meeting of the British Association for the Advancement of Science, seems never to have heard of Dr. Corvisart's article on the subject. Dr. Harley maintains, in opposition to the latter physician's statements, that in the administration of duodenal ferment, it is not necessary to imitate nature, who prevents pancreatine from passing into the stomach. For the causes of the difficulties met with by Dr. Corvisart, and the means to overcome them, see Propositions 13, 14 and 15, paragraphs C and D of the summary, and page 51 of the Essay.

tains. The trophic, or alimentary standard of food is not so easily fixed.

I. When it is more urgent to allay pain and irritation about the digestive organs than to restore muscular energy, the food should consist of that kind of aliment which is most quickly and completely dissolved, whatever be the amount of peptone it yields.

J. But when it is more important rapidly to restore muscular force than to allay gastro-intestinal pain, we should, on the contrary, give such food which, the digestive force being the same, yields the greatest weight of peptone, though that food be likely to dissolve and digest slowly. (See Proposition 17.)

K. He who digests with one organ only, (stomach or pancreas,) is thereby put on half allowance as regards peptone; and he who eats only albumen or gelatinous tissue, (instead of caseine or musculine, which yields double as much peptone,) is also put upon half allowance; and with a normal and equal digestive force is only half nourished. (See Proposition 17.)

In the two preceding cases, an over-activity either of the one organ (first case,) or of both organs (second case,) may occur, and extract from the food the full allowance of peptone. But we must not long trust this extreme functional exertion; for any persisting over-activity must sooner or later end in exhaustion.

L. We should not give for a long time one kind only of nitrogenous food, not only, because one kind of azotized aliment is not capable of repairing the waste of the organism, but also because the same article of food given exclusively and continuously (for a week for instance) no longer excites gastric secretion, and no longer fully undergoes the digestive transformation.

M. Most of the peptones upon which I have made experiments, have the peculiarity of not being precipitated by neutral acetate of lead. Now, in all cases where the albuminoid matters of the urine happen to be of the albuminoid kind, they remain in solution, in spite of the acetate of lead used to precipitate them. They therefore mask the sugar more effectually than all other ingredients of the urine when the potash and copper test is employed. The presence of sugar may thus be overlooked when it really exists in the urine.—*London Lancet.*

Lectures on Asthma, Delivered at Hotel Dieu, by Prof. Trousseau.

[Translated from the Gazette des Hôpitaux of Oct. 19th, 1852, for the Boston Medical and Surgical Journal.]

LECTURE VI.—TREATMENT OF ASTHMA.

In some places where asthma is a common malady, the treatment of this affection was formerly given up to empirics. In the East Indies, it was a popular remedy to smoke a certain plant, which was nothing but the *datura metel*. Dr. Anderson, a physician at Madras, recommended the use of this plant; he sent some of it to an English officer, who brought it to Europe in 1802, and gave

part of it to Dr. Sims, of Edinburgh. That gentlemen perceiving its efficacy, tried as a substitute the *datura stramonium*, and to-day the *stramonium* has become a popular remedy in the treatment of asthma.

What we have said of the *stramonium* is applicable to the other species, the *ferox* and *fastuosa*, as well as to the metel which was first employed, and to the other *Solanaceæ*; but most commonly it is the *stramonium* which is employed. Of all the remedies administered to overcome the attacks of asthma, this usually succeeds the best. Its dried leaves may be smoked, either in a pipe or rolled up in a paper in the form of cigarettes. This remedy does not succeed with all cases; it is generally without effect in habitual smokers. It is easy to understand this, when we reflect that tobacco is a poisonous solanum, and consequently belongs to the same family as *datura*; so that being accustomed to the action of nicotine may hinder the action of the active principle of *stramonium*. Nevertheless, I have known tobacco smokers who found relief from *stramonium*; which proves that this has a specific action different up to a certain point from that of nicotine, and that consequently one cannot replace the other entirely. There are, at the same time, asthmatics, who, not making an habitual use of tobacco, are able to calm their attacks by smoking that plant. I myself am of the number; and I have already told you that it is often sufficient for me to take a few whiffs of a cigar to obtain entire relief.

In general terms, all the poisonous *Solanaceæ*—*Datura*, Tobacco, *Hyoscyamus*, *Belladonna*—possess more or less the same properties. They all enter into the composition of the *cigarettes Espic* of Bordeaux, cigarettes which have enjoyed for a long time a great reputation in the treatment of pure asthma and pulmonary catarrhs, complicated with nervous accidents. They are prepared in the following manner:

Selected leaves of <i>Belladonna</i>	0.30 centigr.
“ “ “ <i>Hyoscyamus</i>	0.15 “
“ “ “ <i>Stramonium</i>	0.15 “
“ “ “ <i>Conium</i>	0.05 “
Gummy extract of Opium	0.013 milligr.
Cherry-laurel Water.....	q. s.

The leaves, dried with care and freed from their nervures, are broken up and carefully mixed. The opium is dissolved in the cherry-laurel water; the solution is equally distributed over the mass. The paper which is used to form the cigarettes is previously washed, at the time of the moistening of the plants above mentioned with the cherry-laurel water, and suitably dried. We can understand the success of this remedy.

It is always very important, when we prescribe to asthmatics the use of the *datura* and other solana, to prescribe the abuse of them; otherwise they would soon exhaust the power of these remedies. It is when the attack is violent, and only then, that recourse should be had to them. The patient should smoke two cigarettes a day, or

rather each night at the moment of the attack, and not seven, eight, or ten, as a great many are tempted to do.

When the patient cannot smoke, a substitute may be supplied by burning the datura in his chamber, surrounding him in this way with an atmosphere of antispasmodic smoke.

I repeat, with this method of treatment, as with all, at least with all those addressed to nervous complaints, we must pay special attention to individual peculiarities. One patient will be benefitted by the Datura, another by Belladonna, another by Hyoscyamus, a fourth by Tobacco. There are those, also, and the patient No. 1 is of the number, who cannot bear the Solanacæ; for these we must employ other remedies justly extolled.

Among these remedies, I would mention fumigations of nitre paper, made in the following way:—make a saturated solution of nitrate of potash, with which a sheet of unsized paper is to be soaked. This paper, properly dried, is divided into a certain number of parts and each one of them is rolled into the form of cigarettes, which the patient smokes like a tobacco cigarette. If he cannot use it in this way the paper is rolled up into a ball, and then lighted; the smoke is received into a tunnel, or more simply still, into a cone of paper, of which the patient places the end in his mouth, inhaling, thus, whiffs of the smoke.

In some patients I have associated both methods of treatment, by causing them to roll up the leaves of the solana in a cigarette of nitre paper.

Among the remedies used in the treatment of asthma, is one, by turns vaunted by some, and proscribed by others, in too sweeping a manner, for in a certain measure it renders signal services; I refer to the application of ammonia to the back part of the pharynx.

This treatment is due to Ducros de (Sixt). Called to a patient suffering from asthma, he applied by means of forceps, to the back part of the pharynx, a large hair pencil filled with water and aqua ammoniæ in equal parts.

An eccentric man, and full of the strangest medical theories, Ducros was led to this practice by this singular idea, that the bottom of the pharynx was the centre from which emanated all the nervous power of which he thus sought to modify the action. Strange as his point of departure was, he obtained real success from his ammoniacal applications; that which he obtained particularly in the case of the sister of Louis Philippe, gave him at once a great reputation in Paris. Experiments made by other physicians, by M. Rayer, by myself, showed, in some cases, the efficacy of this remedy. But in others, I had occasion, for my own part, not to flatter myself for having employed it; formidable symptoms occurred at the moment of making the application; and while acknowledging its advantages, I ought to warn you of its dangers.

Two cases will always dwell in my memory:

A strong man, of colossal frame, came one day to consult me in my office; he was sent to me by my colleague and friend, Lebreton. At the moment when I introduced into the back of the throat

the brush charged with the diluted ammonia, he was seized with a frightful paroxysm of orthopnoea; in an instant he leaped to his feet as if thrown up by a spring, and rushed to the window in a state of fearful suffocation. I believed he was going to die, and he thought the same. Nevertheless, the relief came; but the patient did not care to try the second experiment.

Some time after this, a lady, whom I have since had occasion to see, came to consult me. This time I operated with the most extreme caution; and, notwithstanding, hardly had the brush touched the pharynx, when a terrible attack of dyspnoea came on. This time, at any rate, I was able to watch the result of treatment, and I learned that the patient remained two months without a return of her attacks; an exemption which she had not had for a long time.

Our patient in No. 1, will tell you that he, too, has been subjected to this application of ammonia, and that the only time he submitted to it he was seized with such an attack of dyspnoea that he seemed to be at the point of death. From that moment, too, he had his attacks every four days, returning at the hour the operation was performed, while previously he had an attack only once in three months.

The treatment of Ducros, then, does not cure all cases, although many patients bear it with perfect ease. Ducros employed it daily without ever observing any bad effects. Nevertheless, the accidents which I have witnessed have shown me that we should use it only with extreme caution, and that death itself may happen in the midst of one of these fearful crises. Therefore, when I have recourse to this remedy, I take the precaution which I also recommend you to employ. I cause the patient first to breathe the vapor of the ammonia, by passing under the nose a phial filled with this alkali; then I touch the throat the first time with a solution of one part ammonia to nine parts of water. The next day I use a solution containing eight parts of water, then seven, gradually coming to a solution of one part to three, and at last, when the patient has become accustomed to it, I use a solution of equal parts.

There is another method of employing ammonia, which is to keep the patient in an atmosphere of ammoniacal vapors, which are disengaged by leaving in the chamber plates filled with this substance.

It is to these vapors that certain patients owe the relief which they obtain by a residence, more or less prolonged, in places where this ammoniacal vapor is disengaged. I have already quoted the case of the captain of a vessel, whose history Dr. Vidal communicated to me, and who was free from his attacks while he was navigating a ship filled with guano.

The internal use of ether, either under the form of a syrup, or in capsules, is a means which also sometimes succeeds; sometimes, also, I have obtained good results from an emetic given at the right time. That which I employ is ipecacuanha, of which I give forty-five grains in powder, divided into four parts, to be taken every ten minutes until an effect is produced.

I have indicated some of the means proper for combating the at-

tacks of asthma ; it remains for me to speak of the means to be employed to prevent their return.

Here the intervention of art is often less efficacious than in the first case ; often it is powerless.

The following is the method of treatment which has had, in my hands, the most fortunate result in the cases in which I was able to try it.

This plan of treatment is long, and requires to be followed with great exactness ; it is composed of the following series of means :

1. During ten successive days in each month, the patient takes, on going to bed at night, at first, one ; then three days after, two ; and the four last days, four pills of the following composition : extract of belladonna, 0.01 centigr. ; powdered belladonna root, 0.01 centigr. Ft. pil. i.

2. During the next ten days, the preparations of belladonna are replaced by the syrup of turpentine, of which the patient is to take at night four hundred and fifty grains.

3. During the last ten days of the month, the patient is to be put on the use of arsenical fumigations, which are made in the following manner :

A solution is made with fifteen grains of arseniate of soda in three hundred of distilled water. With this solution soak a piece of paper, not sized, so that it may dry easily ; the paper, properly dried, is divided into twenty equal parts, each of which, consequently, holds five centigrammes, or three quarters of a grain of arseniate of soda.

Each piece of paper is folded into the form of a cigarette. The patient, having lighted it, inhales the smoke, which by a slow inspiration is made to enter the bronchial tubes. But four or five whiffs should be taken once a day. In the same way as with the inspirations of nitre, if the patient cannot smoke the cigarette, he makes use of it by burning the piece of paper rolled up into a ball under a tunnel, or paper cone, in the manner I have mentioned.

Finally, as a complement to the treatment, the patient ought to take, once in ten days for a year, in the morning fasting, a powder of a drachm of Peruvian bark. During fifteen years that I have employed this method of treatment, I have had reason to be pleased with the result in a good number of cases.

In speaking to you of the causes of asthma, I have told you that climate and locality have a decided influence on certain patients ; I have mentioned cases of asthmatic patients who never had an attack while they resided in certain localities, whereas in others they were constantly tormented. This circumstance should be taken advantage of. But in advising these patients to change their residence, you ought to refer them to their own experience, or to warn them, if they have not tried this method of treatment, often efficacious it is true, that experience alone should be their guide, for often you may exhaust the jurisdiction of medicine, so to speak, without obtaining satisfactory results. There does not exist, in fact, an absolute rule in this matter. A place answers perfectly well for

one patient, which does not suit another. Thus, low places generally agree with asthmatics; high lands are generally hurtful, and yet I have known a general, who, subject to incessant attacks of asthma during his residence in Paris, was free from them during ten months that he passed at Clermont-Ferrand, and had not the slightest attack during the time that he remained among the mountains of Mont-Dorè, where he made numerous excursions on foot and horseback.

You perceive, then, the peculiarities of this singular affection; etiological, pathological, therapeutic peculiarities, all show you that asthma is of an essentially nervous nature.

S. L. A.

Diphtherite.

As this disease is now so wide spread as to attract the almost universal attention of the profession, the following facts collected from various sources may prove of interest:

Its History.—Dr. Hillier,* of London, after referring to the various epidemics of sore throat described by early writers, proceeds as follows: Dr. Bard, of New York, writing in 1771, is the first author who distinctly describes the formation of a false membrane similar to that which is found in croup. He describes cases in which there was angina alone, others in which angina was combined with laryngitis, and others in which there was laryngitis alone. He quite discards the notion of gangrene or ulceration, which all the previous writers had described, and considers the white appearances to depend on an exudation. These views were nearly lost sight of until M. Bretonneau, in the beginning of the present century (1826), wrote a treatise on diphtherite, in which he states that this throat affection is not attended with ulceration or gangrene, but is closely identified in every respect with croup. Since Bretonneau's time the disease has been described by many French writers, among whom are Guersent, Isambert Rilliet, Barthez, Trousseau, Bouchut and Empis. There was a very virulent epidemic in Paris in 1855. From the early part of 1855, to March, 1857, a very virulent epidemic of it prevailed in Boulogne, during which there died 366 persons, of whom many were English. There was less disposition in the false membrane to spread to the larynx than had been noticed by Bretonneau. The recoveries were attended with extreme debility, and occasionally by gastro intestinal complications. M. Lemoine describes an epidemic at Nèvre, in which air passages usually escaped. M. Jobert has described another in the department of Haute Marne, where the nasal fossæ were usually invaded, and not often the larynx. M. Lespiau has given us an account of an epidemic which occurred among the soldiers at Avignon, in the autumn of 1853: here the false membrane usually spread to the air passages. Of 1,796 sol-

* Medical Times and Gazette, January 29, 1859.

diers, 195 were attacked ; and out of 22 children, 4. In the cases secondary to other diseases, nearly all died ; while in the primary cases only 6 per cent died. Such, then, is the French account of this disease as existing in that country during the present century. I must now come down to the epidemic which has been described in this country during the past eighteen months. It first attracted general attention in England of late years in the autumn of 1857, a few cases having occurred for twelve months previously ; during the winter it increased and prevailed in Kent, especially near Canterbury, Essex, Suffolk and Norfolk ; subsequently it spread to Staffordshire and the midland counties. During June, July and August, it spread northwards to Lincolnshire and Yorkshire ; and since then has prevailed in very many parts of England.

In this country there has been a very general prevalence of this disease during the last year, and in certain localities it has been very fatal.

Its Character.—Dr. Hillier gives the views of writers : Bretonneau lays great stress on the great resemblance during life between the false membranes on the back of the throat and sloughs. If the patches are circumscribed, the œdematous swelling of the cellular tissue around makes them appear depressed, and one is tempted to believe that one has a foul ulcer with a considerable loss of substance. If, on the contrary, they are extended on large surfaces, they are partly detached, hang in flakes more or less putrified, and simulate the last degree of sphacelus. The disease to which he gave this new name had the following characters : ‘ The diphtheritic inflammation, he says, extends itself nearly as a liquid which is poured out. There are often some long narrow stripes of a deep red color, which stretch into the pharynx or descend into the trachea. A band of exudation matter is formed on the middle of each stripe.’ He thinks that, except by post-mortem examination it is often impossible to distinguish between false membrane and sloughs ; and even after death unless the examination be careful the two may be confounded. Its onset was not usually very alarming, but manifested only by a slight difficulty in swallowing, and sometimes by gentle pain. There was slight febrile disturbance, and prostration more or less marked. Soon the characteristic false membrane was seen. Before its appearance there was a circumscribed and punctiform redness observed in the pharynx, without any swelling. It was nearly always in one tonsil that these appearances commenced, and the whole gland was soon involved. A little later, on the surface of the tonsil, little opaque patches formed like coagulated mucus. According to Bretonneau, under this layer mucous may afresh accumulate at certain points, and simulate vesicles or small pustules. At first the false membrane is transparent, but it soon becomes opaque and more consistent. It varies from a very thin membrane to a quarter of an inch. Its color varies from yellowish white to greyish or even black. It extends in width, the redness of mucous membrane preceding its formation. On lifting the morbid product it is found united to the mucous membrane by small filaments, which Bretonneau thinks pen-

trate the mucous follicles. The seat of exudation is said to be between the epithelium and corium. The mucous membrane underneath was injected of a dull red color; on it were often seen black ecchymoses, oblong and irregular in outline; they were sometimes enough to make the membrane livid and like a cancerous excrescence. The lymphatic glands of the neck always became engorged. The breath was commonly fetid. There was usually salivation, the matter being yellow, fetid, and sanguinolent. Pain was not proportionate to other symptoms; it was sometimes quite absent. The voice was dull and nasal. The false membrane had a strong tendency to spread to the larynx, and then, says Bretonneau, to pass into croup. In some cases the skin became coated with a similar exudation, especially the *alæ nasi*, backs of ears, the anus, vulva, and nipples, as also, blistered surfaces. The membranes from pharynx were often expectorated in considerable sized pieces. The pulse was usually small and weak, but little more frequent than natural; there were moderate thirst, and loss of appetite, sometimes diarrhoea, and less frequently vomiting. There were nearly always great prostration and lowness of spirits. The great danger of the disease arose from its spread to the air-passages. The disease sometimes proved fatal from prostration, but this mode of death was more rare than the former, according to Bretonneau and other French authors.

Some writers maintain that diphtherite is only a masked variety of scarlatina anginosa, while others believe the diseases are totally distinct. Others, again, think they have met with distinct cases of each disease, and have also seen cases of scarlatina complicated with diphtherite. Dr. Cormack thinks that it is a malignant herpetic eruption of the throat; and others say it is only a malignant form of quinsy. These differences of opinion, as to the nature of the disease must, I believe, be in great measure ascribed to the fact that many of the observers have not met with cases of the genuine disease in a typical state, and have consequently formed erroneous conclusions founded on a partial experience, and from the presence of an epidemic of scarlatina anginosa, and cynanche maligna or scarlatinous angina at the same time.

Dr. Kingsford (*Lancet*, November 6, 1858) speaks of paralysis of the muscles of the neck, pharynx, and larynx, as a sequela to the severe form of diphtherite. He, however, appears to me to include in his description of the disease, cases of scarlatina anginosa. He also states that Dr. Gull informed him that he had met with a case in which the upper extremity was involved, and that he had himself just seen a lady recovering not only from loss of speech and deglutition, but also from partial blindness and paralysis of both arms, the result of this formidable complaint.

Dr. Semple, at the Medical Society of London, described some cases which he saw at Bagshot. He thinks they were very different from scarlatina. The onset was very insidious; and when advice was first sought, the pellicle had often reached the air passages. Some died by asphyxia, but many more from exhaustion. It did not specially attack the puny and ill-fed, nor those living under unfavorable hygienic conditions.

Dr. Wade, of Birmingham, who has recently issued a pamphlet on the subject, considers that all the cases described by Fothergill and Huxham were the same as those described by Chomel, Bard, and more recently by Bretonneau; he does not consider that the circumstances that some of the cases were very similar to scarlet fever, and that the earlier cases were described as being attended with sloughing and ulceration, are enough to distinguish them.

Dr. Laycock, of Edinburgh, in a clinical lecture published May 29th, 1858, regards diphtherite as a disease produced by fungous growth, *oidium albicans*, the same that is found in thrush. He says: If the fungus multiply in a population at the same time that there is an epidemic of scarlatina or rubeola prevalent, that epidemic may be expected to take the diphtheritic form.

Regarding the nature of the false membrane affecting the throat in diphtheria, Dr. Harley* states that various and inappropriate names had been given to it, such as fibrinous, plastic, and fibro-plastic, all of which terms are very apt to mislead the mind as to its true nature. He had examined it in twelve cases, and found it to consist neither of fibrin nor fibro-plastic cells, but simply of the epithelium, mucus, and mucous cells proper to the part of the throat from which it came. When blood corpuscles were found in the exudation, their presence was due to some accidental abrasion of the mucous membrane. Pus-cells were also occasionally present, especially in those cases where ulcers had formed after the application of caustic. The false membrane, Dr. Harley believed, was composed of a hypersecretion of the ordinary mucus, and the presence of fungi upon it was due to some accidental circumstance. In the twelve cases he had examined, the *oidium albicans* was absent in all except one; and even in that case the fungus did not grow upon the membrane until fifty-six hours after its removal from the patient. While speaking of the *leptothrix buccalis*, he related a very interesting case of diphtheria that occurred in University College Hospital. Several yellowish colored masses taken from the pharynx, œsophagus, and stomach, after death, when examined by the microscope, were thought by some experienced microscopic observers to contain numerous algæ. Dr. Harley pointed out to the Society, however, how he had been able to demonstrate that the supposed algæ were, in reality, crystals of fatty acids. But he did not mean to deny that algæ were sometimes found on the diphtheritic membrane; for, as they constantly occur upon the tongue and between the teeth of the most cleanly individuals, it is reasonable to suppose that they may occasionally attach themselves to the false membrane. What Dr. Harley wished to be understood to mean was, that neither fungi nor algæ were essentially components of the exudation, far less could they be regarded as constituting the disease. Diphtheria was, in his opinion, as much a blood disease as either small-pox or typhus, and the exudation on the throat was merely one of its characters.

* British Medical Journal, Jan. 29, 1859.

Its Treatment.—Bouchut† teaches that, whether sporadic or epidemic its treatment is the same. The indication is the mechanical or chemical removal of the false membranes, and the prevention of their re-formation by the aid of contra-stimulant and anti-plastic remedies. The first of these is best fulfilled by the exhibition of emetics every or every other day. The membranes may also be destroyed by the hydrochloric acid, so much approved of by MM. Bretonneau and Trousseau, by nitric acid, nitrate of silver, and the actual cautery. Although these means are, no doubt, often of service, M. Bouchut does not resort to them; but if he did, he would give the preference to the hydrochloric acid, rejecting the actual cautery as a barbarism. The means he employs is glycerine, which he finds to be a very efficient solvent of false membranes, when not too hard, and especially when they are muco-fibrinous, rather than fibrinous. There are great differences among these false membranes to be noted. Some are but slightly resisting, whitish, pultaceous, and formed of a soft exudation filled with muco-pus and granular bodies, in the midst of numerous epithelial cells, and almost destitute of fibrin; others, which are more resisting, consist of a greyish albumino-fibrinous exudation, contain a little more fibrin than the former, and are easily torn. Others are entirely fibrinous, whitish, and tough, exhibiting under the microscope filaments of well-marked fibrin, amidst which a small quantity of epithelium and granular bodies are observed. Of these three varieties of false membranes, the first two readily dissolve in glycerine, while the last does so incompletely. These latter also become softer and less bulky, but they do not entirely disappear under the action of glycerine.

For the purpose of preventing the reproduction of the false membranes, various alteratives and specifics have been employed. Mercury, M. Bouchut believes, risks doing as much harm as good; and he thinks better of divided doses of antimony, which, with proper precautions, may be given to children. Baron strongly recommends carbonate of soda or the Vichy waters, both as a preventive and a solvent agent, but from this M. Bouchut anticipates little. Chlorate of potassa, highly useful in ulcerative and gangrenous angina, giving rise to purulent or pultaceous products, and in stomatitis, has proved of no efficacy whatever in his hands in numerous cases of diphtherite and croup.

M. Pichenot states that during an epidemic at Censerey, Department of Cotè-d'Or, the employment of emetics prior to the appearance of the membranes, the removal of these by alum, and then the repeated application of nitrate of silver, this treatment being combined with the use of tonics and strong broths, constituted an efficacious plan of management. Of 125 children, presenting all varieties of the disease, 77 recovered and 48 died.

M. Loisseau, of Montmartre, declares that during fifteen years that he has been in the habit of employing alum and tannin through the medium of laryngo-tracheal catheterism he has not lost a case.

† *Med. Times and Gaz.* from *Gaz. des Hop.*

M. Ollivier, of Ingrandes, states that during an epidemic of scarlatina with ulceration and couenneuse angine, the best results attended cauterizing the parts with his pure acid nitrate of mercury and the external employment of leeches.

Dr. Heslop, * in an article on the disease as it has lately appeared in England, strongly recommends the tincture of iron, which he regards almost as specific. Dr. Camps, in a paper lately read before the Medical Society of London, considers that the general treatment should comprise the administration of the chlorate of potassa with chlorine, or a combination of cinchona bark or its alkaloid with the mineral acids. He adds: In severe cases calomel should be given in repeated doses until ptyalism is produced, and emetics, in the earlier stages, have been administered with good effect. The powers of the patient should be supported by wine, beef tea, and other invigorating means.

Dr. Hiller † says: It has been hastily concluded that mercurials are contra-indicated in the present epidemic. When the disease runs a rather slow course, and the air-passages are attacked by the extension of a tenacious false membrane from the pharynx, I should be disposed to employ calomel in small frequently-repeated doses, or mercurial inunction, not omitting stimulants, and even tonics, if the symptoms appeared to require them. We must be quite sure we are not dealing with a case of scarlatinal angina before we resort to mercury. The use of emetics may also be allowed in some cases. The tonics most to be recommended are bark and chlorate of potash, or hydrochloric acid. Should tracheotomy be ever employed? If dyspnœ is a marked symptom, and the signs of blood poisoning previously to the air-passages being involved were not very marked I should advise its employment, though not with any great confidence of its doing good.

Dr. Laycock ‡ says: I may observe, that antiseptics and parasitocides appear to be the most efficient remedies in diphtheria. I can speak very favorably of the value of the tincture of the sesquichloride of iron (an antiseptic) and hydrochlorate of potassa. The latter, taken alone, will sweep away the pellicle in a few hours. Hydrochloric acid is also useful. Borax, which is so efficient in muguet would probably be serviceable in diphtheria. And, I may say, that I have found a concentrated solution of borax as useful a local application in favus as any that I have tried. It is also serviceable in certain forms of lepra, applied externally, and, I believe, from its action as a destructive parasiticide. There are other remedies of this class, as the linimentum æruginus, the chloride of zinc, chloride of lime, etc. Early blood-medication is far the best treatment, inasmuch as local applications, like the nitrate of silver, cannot have any effect on the air passages, where the greatest mischief is done. Calomel and blisters seem wholly contra-indicated; indeed the latter must be considered far more likely to be hurtful than beneficial.

* Pacific Med. and Surg. Journal, September, 1858.

† Med. Times and Gaz., Feb. 12, 1859.

‡ London Lancet.

Wine, in moderation, is likely to be useful, and makes an excellent gargle diluted one-half.

Mr. Stiles * says: I have prescribed twenty minims of the tr. ferri mur., with the same quantity of tincture of columba, in water, to be taken three times a day, and the frequent use of a gargle containing a drachm and a half of Beaufoy's solution to eight ounces of water. And I have also recommended that a portion of the gargle may be allowed to pass down the throat, as I quite agree with Mr. Davy, that the putrid fluid which is swallowed is one of the chief sources of danger. I apply Beaufoy's concentrated solution by means of a sponge probang, six or eight inches in length, which affords a fair opportunity of sufficiently mopping the pharynx and parts over the base of the tongue and epiglottis, to prevent the extension of the exudation to the larynx.

Mr. Alford* says: Having had several cases of diphtheria, I tried a gargle of chlorinated soda, of the strength of from half a drachm to a drachm in an ounce of water, to be used every ten or fifteen minutes, so as to wash away, and *keep washed* away, the morbid growth, and, by the constant application of the chlorine contained in the gargle, destroy the poisonous character of the disease. When this plan is persevered in, the white fungi and jelly-like mass are washed away; and the throat is kept free by constant gargling. I believe the chlorine itself not only counteracts the poisonous nature of the morbid secretion, and destroys its deleterious character, but also has a beneficial effect on the system at large; and again, by destroying the virus, prevents its spreading to other members of the family.

Mr. Hodson* used chlorine by inhalation in a bad case with good results: I then proposed trying the effects of inhalation of the vapor of boiling water, mixed with a portion of solution of chlorinated lime. A very serviceable vapor-bath was thus extemporized. An earthen milk pan was placed on the bed close to the child; above this a large open umbrella; shawls and a piece of drugget were thrown over, hanging down to the bed so as to inclose the child and milk-pan completely; the latter was then half filled with boiling water; and, lastly, a few spoonfuls of the chlorinated solution were added. After a few minutes the exudation became looser, and at the end of ten minutes, when the coverings were removed, the breathing was much freer. I directed this vapor-bath to be repeated every three hours, and occasionally a large sponge, dipped in boiling water, with a little of the solution sprinkled on it, held beneath the mouth and nose. For two days this plan was steadily pursued, and excepting for a few hours, the improvement was uniformly progressive.

Dr. Perry speaks favorably of turpentine as a remedy in diphtheria: I rub up 3ij. of the spr. terebinth. with the yolk of an egg, and add enough syrup to make a 3xij. mixture. One tea spoonful

* British Medical Journal, January 8, 1859.

in milk every two hours. Then dissolve 3j. of the ammon. carb. in 3xij. of water, and give one tea spoonful every two hours also in milk. Besides this the child takes port-wine, porter, and beef-tea, or wine with the yolk of egg *ad lib.* I have not found in any of my cases strangury caused by the turpentine. The patient dislikes it of course, and it requires a determined and attentive nurse; but I have found the plan very successful, and I speak of those cases where decided croupy breathing and fits of suffocation have made their appearance.

Dr. Blake,* of California, who has had much experience in this affection, thus gives his treatment:

The medicines I generally have recourse to are the chlorate of potash combined with the spirit mindereri when there are feverish symptoms, and with quinine, or tincture of bark when the pulse becomes too soft. How the chlorate acts in this disease I cannot tell. It might be merely by its aid as an antiseptic, neutralizing the secretions that have found their way into the stomach from the throat, or it might exert an analogous action on the poison in the blood; or it possibly might be inert, the patient getting well merely *post*, and not *propter hoc*; however, I think at least as an antiseptic we are justified in giving it. The dose should be from five grains to a scruple every two or three hours, or less frequently when the symptoms are not severe. I am also in the habit of prescribing considerable quantities of charcoal with a view of neutralizing the foetid secretions that must find their way into the stomach.

On Tuberculosis and its Treatment. (No. 8.) By GEORGE J. ZIEGLER, M. D., Physician to the Home for Invalids, with Diseases of the Chest. Philadelphia.

4. *Light*.—Light is a very important condition of life, though apparently not so essential thereto as heat. Nevertheless, its influence is very potential in promoting life action; and besides, as it is analogous to, and correlative with heat, it is hence more or less necessary to the existence and development of the vital economy. The influence of light has, however, been considered too exclusively limited to the lower forms of life, the vegetable especially, while in reality it is highly essential to the existence and development of animal as well as of vegetable life. Its influence is, therefore, not limited to plants alone, but extends also to animals, man inclusive. This influence is especially exerted in promoting the organic or vegetative processes, and is thus strikingly manifested in the growth and development of both plants and animals. Its power in thus promoting the vegetative functions of both plants and animals, is very great, and often strongly marked.

Still, this power is not exclusively limited to the promotion of the organic functions, or the vegetative life of animals alone, but is also more or less active in promoting those of the animal life, or the life

* Pacific Med. and Surg. Journal, Sept. 1858.

of relation. This is constantly exhibited in the influence which it exerts in augmenting the sensibility, impressibility and irritability of the special senses and general nervous system, and increasing the excitability and activity of the muscular organs. The influence of light upon the animal economy does not, however, stop here, as it is, moreover, still further operative in exciting the functions of the cerebrum, and is thus active in promoting the higher and more exalted processes of psychical life. While, therefore, light is very active in promoting the functions of organic or vegetative life, it also exerts more or less power over those of both the animal and psychical life.

That light does thus exert a powerful influence over the various functions of the animal economy, may be made more clearly manifest by a more particular notice of some of the phenomena to which it gives rise. Thus, for instance, it enables the organic or vegetative life to exert sufficient chemical power to convert inorganic matter into organic compounds for organic purposes. Plants are thus enabled to take up, decompose, recombine, and finally appropriate various simple and compound substances, both inorganic and organic. Light is hence especially useful in causing the plant to decompose carbonic acid, water, and ammonia, and to re-arrange their constituent elements, or combine their components in such manner as to form other and more complex bodies. In this way the plant is enabled to generate organic compounds out of simple or complex substances, and thus to prepare and supply the necessary pabulum for the more immediate, as well as ultimate purposes of life.

This chemical influence of light appears to be more energetically exerted on plants than on animals, because, in the first place, they are the more immediate agents for the preparation of organic matter out of the crude elements; and, in the second place, the material employed for alimentary purposes by the latter, is usually in a state more nearly approximate to that of their own structure. Though correct in the main, this is not, however, absolutely the case in all instances, as much matter, both simple and compound, inorganic and of a low grade of organization, is introduced, combined, and transformed within the animal economy, prior to its more specific and ultimate metamorphosis and final assimilation. But besides these preliminary changes incidental to the construction of the organic pabulum, for nutritive purposes, active chemical metamorphosis takes place in the retrogressive processes, for the perfection of which it is more than probable that light is highly essential.

The influence of light is, however, not only operative in thus modifying matter, but it is also active in promoting the development of living forms, both vegetable and animal. This is apparent to common observation, though it has also been demonstrated experimentally. Thus, for instance, it is strikingly exhibited in the rapid growth and extreme development of the flora and fauna of the tropics, (where light is most intense and abundant,) and the relative difference between them and those of the arctic regions, though of course this effect is due, in some measure, to the conjoint influence of

heat. It is also exhibited in the relative influence of day and night, light and darkness, upon the growth and development of both plants and animals. Moreover, it is still further shown in the partial or complete suspension of organic metamorphosis and development by the more permanent privation of light, a striking illustration of the truth of which is presented in the experiments of Dr. Edwards, in which tadpoles were prevented from undergoing their usual development into frogs by being secluded from the light. Experiment, then, as well as observation, teaches that light is essential to the normal development of both vegetables and animals, and this is as true of the human body as of any other living organism.

The influence of the light in thus promoting chemical metamorphosis and organic development, is hence very extensive and potential. But, as before intimated, this photogenic influence is not exclusively limited to the organic or vegetative life, as it is also more or less active in promoting the functions of the dynamic apparatus, or those of the animal and psychical life; in proof of which it is only necessary to point to the greater restlessness and activity of the body and mind during those periods of time in which the diurnal as well as the annual increase of light takes place in the same spot, as well as in different parts of the earth; and conversely, to the inactivity, inertia, and even stupor of the diurnal and annual diminution of light, during the night and those long seasons of darkness in the polar regions. Also, to the marked contrast appreciated by all, between the mental exhilaration and cheerfulness induced by clear, bright weather, and the dullness, gloom and even despondency, produced by dark and cloudy weather.

Light is, therefore, mainly instrumental in causing chemical combination and decomposition, in generating organic compounds, in promoting nutrition, disintegration and depuration, and in stimulating the dynamic functions of the brain and nervous system. It is thus seen that the influence of light upon the different parts and processes of the human economy, the organic, animal and psychical life inclusive, is very powerful, and indeed of so much importance as to constitute an essential prerequisite for its normal development and healthy status.

The sources of light, or rather the more immediate agents for its development, are somewhat numerous, though the principal and most important is planetary influence, and the planet thus most active is, beyond all question, the sun. Besides this, there are others connected with both the inorganic and organic world. Thus, for instance, mechanical, chemical, organic and dynamical action gives rise to the phenomena of light, with different degrees of intensity and quantity proportionate to the activity of the developing cause. Some of these are more or less under artificial control, and the influence of this artificial light is, in some respects, similar to that of the sun. The intensity and quantity of solar light varies according to the period of the day and season of the year in different parts of the earth, and in the same place at different periods of time, though doubtless the general average is always more or less uniform. The

extremes are well marked between the day and night, summer and winter, dry and wet seasons, and between the tropical and arctic regions. The relative effects of these different degrees of light upon the animal economy are usually more or less apparent. Thus in general, as before intimated, the difference and connection between the brightness and activity of the day, and the darkness and inertia of the night, are very striking. Moreover, the difference in the relative activity, vigor and development of life between the summer and winter, and the tropics and polar regions, are also well marked. Within itself, therefore, light is a stimulant, while its absence or darkness exerts a sedative influence. All other things being equal, then, these effects are in relative proportion to the degree of intensity and the quantity of light. The relative influence of these respective conditions of light and darkness are exhibited in both health and disease, and it is with a view to their better appreciation in these relations, in order to thus exhibit more positively their special connection with that particular morbid state known as tuberculosis, that we have offered these preliminary remarks.

The vital organism not only appropriates, but also develops light as well as heat. This is apparent in the absorption of light, as well as by its positive development in both plants and animals, man inclusive. This manifestation of light may occur in both health and disease, life and death. The evolution of light in man is however, somewhat rare, and is considered to be almost if not quite always connected with a state of disease, though it would seem that it may also be developed almost at pleasure in a condition of health. Thus it is stated that a stream of light flowing from the body, may be made visible in the dark, by holding the hand near a broad leather belt moving rapidly. It is also asserted that it may be developed by other means. The forms of disease in man in which light becomes manifest are somewhat different, though they are in the main, of an adynamic type. Thus it has been observed in cancer and phthisis and some other morbid conditions. It has also been seen in connection with the breath, sweat and urine.

The relation of light to life in general, and to the animal organism in particular is thus seen to be most intimate and important. This relation is however, more complex than the preceding considerations would lead us to infer, as we have hitherto treated of it as an unit, while in reality it is a compound of different influences. Thus analysis has shown that it is composed of photogenic, calorific, actinic and colorific rays. The influence of light is therefore, multiple instead of simple, although all of these respective and peculiar constituents doubtless act both conjointly and separately. Notwithstanding however, the apparently compound character of light, it is probable that its constituents are but mere modifications of one and the same principle, arising either *ab origo*, or out of its relations with material substances. It is thus seen that light exerts at least a fourfold influence, and it is therefore probable that this influence varies at different periods according to the relative intensity and

proportion of its constituents. The respective influence of these several elements of light, is more or less evident, but as we have already partially noticed some of the most active, we shall not again particularly dwell upon them; nor can we go into a minute detail of the others, and hence shall only allude in a very general way to some of their separate and combined effects with a view to their more direct bearing upon the special subject of attention. The powerful influence of the colorific ray in causing the development of color in both plants and animals is well known, and is in fact so familiar that many persons and females especially, regard light with so much dread that they avoid it so carefully as to often suffer greatly in general health from its privation. It is especially useful in giving color to the blood and other parts of the animal organism.

The influence of the actinic ray is also very powerful in causing chemical changes both in the inorganic and organic world. It is especially active in promoting the chemical modifications and organic metamorphoses so essential to life action, and hence it is a potential agent in the production of the organic compounds for the development of both plants and animals, as well as active in promoting those changes essential to disintegration and depuration.

It is thus shown that light is a very potential agent in promoting the various processes of vegetable and animal life, and that it exercises a powerful influence over the functions of the human economy, either organic, chemical, mechanical or dynamical, and hence necessarily over the vegetative, animal and psychical life inclusive. This is seen in the potent influence which it exerts in causing the chemical changes essential to the production of the organic compounds for nutritive purposes; in the promotion of the formative and retrogressive metamorphoses; in giving color to the various organic liquids and solids; in aiding depuration; in exciting the senses, and general nervous and muscular system; in stimulating the brain; and, in promoting the healthy development, vigor and activity of the whole organism. While conversely, it is also exhibited in the fact that its absence or darkness, retards or entirely suspends development and the various processes of life, and thus diminishes or checks the activity of the organic, chemical, mechanical and dynamical functions of the animal economy. Proof of this is afforded in imperfect or non-development of plants and animals, and of man especially; in the impairment of general nutrition, disintegration and depuration; in the torpidity of the brain and nervous system; and, in the consequent inactivity of the body, dulness of the senses, inertia and even gloominess of the mind, with more or less stupidity and disposition to sleep. The stimulant influence of light, and the sedative influence of darkness is in fact so well known that it has given rise to the common practice of excluding the light in the treatment of the various forms of disease, those of the brain and nervous system especially, to thus diminish excitement, allay irritation, induce composure and quietude, and promote sleep.*

* This knowledge affords a hint which might prove of much practical advantage in the treatment of many diseases, both general and local, in which a stimu-

Sufficient evidence has thus been presented to prove that light exerts a powerful influence over the vital economy, and that its presence is essential to its perfect development and healthy condition; and moreover, that this is as true of the human as any other organism. While on the other hand, it has also been shown that its absence is a frequent and potential cause of imperfect or mal-development, inertia, and derangement. These derangements are of divers kinds both physical and psychical, and are frequently exhibited in the form of the various cachexias and their concomitants. An insufficiency of light is therefore, an active cause of disease, and more especially of those forms of atrophy and adynamia, connected with anæmia, rickets, scrofulosis, tuberculosis, and similar affections. Its ætiological relation with tuberculosis is well known, though too often overlooked or totally disregarded. Darkness or the privation of light is indeed a potential cause of this disease in both man and the lower animals, and it is necessarily very active in increasing its intensity when it already exists. Hence, all other things being equal, those who are deprived of the vitalizing and beneficent influence of solar light are most frequently and severely affected with phthisis. This is not only true of man, but also of other members of the animal kingdom, hence the prevalence and activity of this disease in rabbits, cats, parrots, pigeons, monkeys, and other animals when obliged to live an artificial life which excludes them from the light. This is exemplified by the frequency and fatality of this affection in convents, prisons, factories, barracks, cellars, menageries, and other dark and often damp places. This vicious system of seclusion from light is however, not only thus often coercive, and involuntary, but also very frequently resorted to from choice in consequence of erroneous views concerning its influence, or false notions respecting beauty of complexion and delicacy of organization. The voluntary seclusion from light is very general, as is evident from the extreme care taken to exclude it from dwellings, offices and other places of business, as well as to avoid it in the ordinary pursuits of life; and, this too is so called civilized society notwithstanding its boasted intelligence and wisdom. This evil, with many others just as absurd and injurious, prevail very extensively, in cities especially, and hence the greater prevalence of the tuberculosis forms of disease and the increased destruction of life in such places. In this connection compare for instance, the fresh and ruddy hue, florid complexion, or swarthy appearance and vigorous condition of those who like farmers, sailors and the various races of men, are freely exposed to the sunshine, with the pale and etiolated aspect, anæmic condition, and adynamic state of those who are more

lant influence is required. Thus persons with purely adynamic states of the eye, brain nervous, muscular and general system, as amaurosis, idiocy, dementia, paralysis, anæmia, inanition, and other atonic conditions, might probably be much benefitted or even restored to health by a free and prolonged exposure to light. Indeed the practical value of such a course has already been demonstrated to a certain extent. This measure alone or in conjunction with other rational treatment is therefore, worthy of a more extended, careful and systematic trial.

or less habitually deprived of the light. To obviate and correct as far as possible therefore, those evils resulting from a deficiency of light, it will be necessary to abandon the senseless and pernicious custom of excluding it from houses by means of shutters, blinds, curtains and other appliances, or of otherwise avoiding it, and to adopt instead the more rational and salutary plan of free exposure to it, to thus secure the due proportion and beneficial influence of this bountiful source of life. A due exposure to light is especially important to children, to thus insure healthy growth and development, and prevent as far as possible the inception as well as aid in the resolution of the various adynamic and atrophic affections so peculiar and destructive to the young. And besides these to thus break up in their incipency those morbid tendencies, which if allowed to develop, so often become active and destroy life at a later period of time.

It is thus seen on the one hand, that general and local atrophy and adynamia, with anæmia, scrofulosis, tuberculosis, and many other pathological states, are frequent results of an insufficiency of light; and, on the other that its presence and influence is very powerful in preventing and removing such morbid conditions. Light therefore, exercises a very beneficial and potential influence, both hygienic and therapeutic, in averting and resolving tuberculosis as well as many other abnormal conditions; and hence those thus threatened or afflicted should be freely exposed to its salutary power. If then this plan of free exposure to solar light was more general much less disease of all kinds, and particularly of that form known as tuberculosis would prevail, and more recoveries would take place of those thus afflicted. It would moreover, not only thus prevent and remove much physical, but also much psychical disorder, as the deficiency or entire absence of light causes in addition to derangement of the organic life, irregular or defective innervation and cerebration, promotes sadness and misanthropy, encourages anxiety and fear, diminishes moral and intellectual vigor, and thereby increases the tendency to physical and moral degradation. While on the other hand, the presence of light causes physical invigoration and mental activity, and promotes cheerfulness, vivacity and morality. It then becomes an important duty as it is a necessity of existence, for every human being to secure its due quantum of light, so as to thus not only preserve, but restore when lost, its healthy physical and mental status. In its various physical and psychical relations light is therefore especially necessary to those predisposed to or afflicted with phthisis to thus prevent or resolve this abnormal condition. Its necessity to such is in fact so obvious that it is scarcely necessary to further urge its importance. Suffice it to say then, that the proper exposure to light of tuberculous persons cannot be too strongly enforced, as it is not only an important hygienic measure, but also a powerful therapeutic agent, and an essential prerequisite to the successful treatment of phthisis.

On Diseases Simulating Laryngitis. By HENRY MADGE, M.D.

According to the best authorities, several conditions are capable of producing symptoms simulating laryngitis. Amongst others that are mentioned are affections of the brain, angina pectoris, certain forms of heart and lung disease, hysteria, aneurisms, tumors and operations, in which the pneumogastric nerve and its recurrent laryngeal branch are interfered with. These, for the most part, simulate the subacute form of the disease. So far as I have been able to gather from various sources of information, the conditions which called forth symptoms simulating laryngitis in the following cases do not seem to have been recognized or even suspected. In considering the subject, it is necessary to keep in view the most prominent features of an attack of acute laryngitis. These are stated to be, violent dyspnœa, profuse perspiration, loss of voice, difficult deglutition, gasping respiration, with occasional severe paroxysms of pain about the neck and chest, and a feeling of constriction and tenderness along the course of the larynx and trachea: all this is accompanied by a most distressing degree of restlessness and anxiety; apprehension and horror are depicted on the countenance; sometimes the inflammatory fever runs high, but if the symptoms continue unabated, prostration comes on, and the patient soon sinks. This is a pretty faithful picture of the disease as seen by myself on several occasions. We are recommended to leech and blister; to administer mercury, opium, and tartar emetic; to bleed freely and promptly; and, if all are unavailing, to perform tracheotomy. As these are formidable measures, it is most important that they should never be employed in merely an imitation of the disease.

Several cases are related in which tracheotomy was performed for symptoms of laryngitis arising from aneurism of the aorta. The following was also a case of mistaken diagnosis:

Having the temporary charge of a practice in the country, I was called one night to a gentleman who had all the foregoing symptoms of acute laryngitis. He was sitting up in bed, gasping and panting in a most distressing manner. On applying the stethoscope to the chest, the breathing was noisy and hissing, the sounds of the heart tumultuous and irregular, and rendered more indistinct from the constant noise caused by the rushing of air through the trachea. The noise was sometimes so loud as to drown all the minor sounds. The head was hot and flushed, pulse quick, jerking and irregular, and the arms wildly tossed about, as if to waft air into the lungs. The patient's frequent entreaties for more breath seemed to be the forerunner of still more painful paroxysms of difficult breathing. He had been in bed about half an hour, when the symptoms began to show themselves. From the very serious appearance of the case, the friends wished me to have the aid of other medical men of the neighborhood. Two of them speedily arrived, and, on seeing the patient, they at once pronounced it a case of acute laryngitis. Leeches were applied to the throat, calomel and small doses of tartrate of antimony given every half hour, with the prolonged use of

a warm bath. Small doses of the ethereal tincture of lobelia were also given which seemed to lull the symptoms for a short time, but always to return with increased severity. A bandage was three times applied to the arm; but, from some misgivings I had about the case, bleeding was postponed. For nearly five hours we had the humiliation of standing by, watching our patient's sufferings, without having done much to afford relief. I then suggested the use of an emetic, which being agreed to, a draught, containing half a drachm of ipecacuanha powder, and one grain of the tartrate of antimony, was at once administered. As this took no effect, after waiting a reasonable time, a second and a third were given. The stomach then emptied itself of a very large quantity of half-digested food. Immediately on this happening, all the symptoms of laryngitis disappeared as if by a charm, the breathing became calm, an anodyne was given, and the patient was soon in a sound sleep. On the following day there was a little feverish excitement, with slight yellowness of the skin, which in a day or two, became decided jaundice. The heart's action was feeble, irregular, and intermittent. Posteriorly could be distinctly heard a whistling sound, so situated as to be indicative of what is called the button-hole contraction of the mitral orifice. The patient, who was about fifty years of age, had generally enjoyed apparent good health, so that this mitral disease had never before been suspected. For a few days he seemed to rally, and great hopes were entertained of a speedy recovery. Subsequently, however, his strength completely gave way, the jaundice continued, the heart disease appeared to gain ground, producing sounds of a very confused character, whilst the pulse gradually became more feeble and irregular.

A physician from one of the London hospitals saw the patient several times. He regarded the jaundice as the leading feature of the case, and considered that nearly all the patient had gone through might be attributed to disease of the liver. Mercury was employed for several weeks; also taraxacum and nitro-muriatic acid internally and in the form of baths. The jaundice gradually disappeared, but now there was great prostration, complete loss of appetite, extreme nervous irritability, and sometimes delirium; sleep much disturbed, and at length constant restlessness. Occasionally the patient was subject to transient paroxysms of dyspnœ; and, getting lower and lower, he died about two months from the first attack.

I assisted at the post-mortem examination, the following account of which is abridged from my notes taken at the time:

Examination forty-eight hours after death.—The body presented an appearance of general emaciation. There was no yellowness of the skin; the brown discoloration which succeeded the jaundice had become mottled from desquamation of cuticle, and large white patches appeared about the forehead and upper extremities. On opening the chest, the lungs seemed to occupy the whole cavity; the whole of the two pleuræ, on both sides were so completely bound together by old adhesions, as to require the use of the knife

to separate them ; the apex of the left lung appeared puckered and indurated, and on cutting into it a considerable mass of tubercular matter was found in its centre. With the exception of a little congestion around this part, and rather more than the usual *post-mortem* congestion, the lungs were soft and healthy ; near their roots was an unusually large number of enlarged, black bronchial glands. The pericardium seemed more than naturally inclined to the right side, and at its lower extremity could be felt a hard substance about the size of a walnut ; this was found to be a fibrous growth springing from the apex of the left ventricle, and connecting it to the corresponding part of the pericardial sac. With this exception, the pericardium was smooth and healthy, and contained about half an ounce of fluid. The heart was large, flabby, and nearly full of blood ; on the left side the walls of the ventricle were remarkably thin, and at the apex was an ossific deposit in a cup-like form, and large enough to receive the top of the middle finger ; this was found to correspond in situation with the external growth, and appeared to form its base. The two larger columnæ carneæ which give attachment to the chordæ tendinæ were both diseased ; that nearest the aortic opening was quite white and cartilaginous—the other completely ossified, and fixed in its position. The chordæ tendinæ were somewhat thickened and rigid ; the curtains of the valve thickened, and studded with ossific deposits. There was also, as was anticipated, contraction of the auriculo-ventricular opening. Altogether, the imperfect state of the valve would easily admit of regurgitation into the auricle, and the marks of disease generally were quite sufficient to account for the whistling sounds heard during life. The aortic valves were soft and healthy, but the commencement of the aorta itself was dilated and covered with deposits. The right side of the heart was immensely dilated ; the ventricle was full of coagula, some of them old, changed in appearance, and partially adherent to the walls of the cavity ; the walls extremely thin and weak ; no ossific deposits ; the tricuspid and semilunar valves healthy. *Abdomen.*—Viscera in normal position ; intestines free, smooth, and apparently healthy ; convex surface of liver fixed by old adhesions to the under surface of diaphragm. This, as well as the old pleuritic mischief, was referred to a severe illness several years before death. The *liver itself was perfectly healthy in size and appearance* ; gall-bladder distended and of a whitish color, and on opening it, about three ounces of colorless transparent mucus escaped. This secretion from the mucous coat was quite free from bile, and resembled white of egg. A gall-stone, about the size of a nutmeg, occupied the neck of the gall-bladder ; its surface was rough and embedded in the mucous coat. This appeared to have effectually prevented the passage of the bile from the cystic duct to the bladder for a very considerable time. Stomach large, but free from disease. Left kidney enlarged and congested ; at its upper part, near the surface, was a small cavity with thickened walls, probably the remains of an abscess of uncertain date. Right kidney smaller, and of healthy appearance.

I have thought it worth while to give the foregoing details, as they may assist in forming an opinion as to what were the circumstances of the case, which combined at the onset to give it the appearance of laryngitis. It might be said in some respects to have resembled a case of laryngismus stridulus occurring in an adult from one of the same causes as in infancy—viz., irritation of the stomach, and the effect of the emetics showed that to be the real exciting cause; but if mere irritation and distention of the stomach from improper or over-feeding were capable in the adult of producing such symptoms, instead of being extremely rare, how frequently we should meet with them! The disease of the heart, with the little tumor at its apex hampering its action, the gall-stone trying to force its way into the cystic duct, and the immovable condition of the lungs, might all have contributed toward the original aspect of the case.*

I must refrain from occupying valuable space by making critical observations on the diagnosis and treatment adopted, or attempting to give a minute analysis of the symptoms as compared with those of real laryngitis; but this may be said, that nothing short of a post-mortem examination could have revealed the true state of the case. The account of it will not only be interesting in a physiological and pathological point of view, but will probably be of practical benefit by placing many on their guard when called upon to treat similar cases. I have already profited by my experience.

About six months ago, I was called late at night to an elderly lady, who had the same symptoms as those detailed in the previous case, but in a milder form. On being told she had taken a hearty supper, I at once gave an emetic, and she got well immediately. This patient has since suffered in the same way on two occasions, and now is always provided with an emetic, to be used, if necessary, when she chooses to abandon herself to the enjoyment of a good supper. She is the subject of heart disease and chronic bronchitis; but on the occasions referred to, being promptly relieved, there was fortunately not a sufficient amount of organic disease to prevent recovery from the effects of the attack.

The chief practical lesson to be derived from a study of the two cases, is simple enough, and its importance is sufficiently apparent. In all sudden cases of violent dyspnoea, it appears highly necessary to find out how far the state of the stomach may be the cause, and, in real laryngitis, to what extent it may modify or aggravate the symptoms presented to our notice.

Even in pure laryngitis—except in peculiar cases—there appears to be no good reason why emetics should not be as beneficial to adults as to children.—*London Lancet.*

* The necessity for giving three emetics was probably owing to the large quantity of food they came in contact with, which prevented their reaching easily the coats of the stomach. The violent efforts at vomiting may have had something to do with the jaundice, by throwing, as it sometimes does, a little bile into the blood; the same efforts may have thrown the gall-stone into the neck of the bladder, and thus made somewhat protracted what would otherwise have been merely a passing jaundice.

PUNCH ON HOMŒOPATHY.—Mr. Punch is accustomed to receive letters and treatises, imploring him not to call homœopathy fudge, and some of them attempting to assign reasons why he should not. In all these communications, the medical opponents of homœopathy are called "allopathists." "Allopathist," as contradistinguished from "homœopathist," of course means a person who treats diseases with other medicines than those which produce similar diseases, that is, who endeavors to cure unlike with unlike, instead of endeavoring to cure like with like. Who are the allopathists? Mr. Punch has an extensive medical acquaintance, but he does not know any. No intelligent medical practitioner attempts to cure diseases in general with specific medicines of any kind. There are very few such medicines known to the medical profession. The principle on which diseases, for the most part, are treated by rational and scientific physicians and surgeons is that of removing impediments to the natural process of recovery, or that of assisting the curative efforts of nature, not necessarily, and not always, by causing people to swallow drugs. When drugs are given by such practitioners, they are generally given with a view to their indirect influence on disorders. For instance, the combination popularly known as the "black and blue reviver," which directly affects internal parts of the trunk, may be "exhibited" for the relief of a headache, or the removal of an inflammation of the great toe.

Professor Holloway is perhaps an allopathist; however, he does not tell us on what principle his pills and ointment cure all diseases. The various doctors who advertise their patent medicines in the quacks' corners of newspapers of the baser sort, may be allopathists also; and likewise the medical profession possibly contains a few fools or imposters who are so describable. But the few specifics used in the ordinary practice of physic may absolutely even act on the homœopathic principle, that "like cures like;" thus differing from homœopathic doses only in not being infinitesimal, and, Mr. Punch supposes, in being efficacious.

In none of the communications about homœopathy received by Mr. Punch is there anything like scientific proof that infinitesimal globules produce any other than infinitesimal effects. Cases of alleged cures, subsequent to the swallowing of these globules, prove nothing, until they amount to enormous numbers. Professor Holloway, and Messrs. Du Barry & Co., adduce plenty of such proofs; perhaps not fictitious. Mere swallowing and cure can be connected as cause and effect only by immense clouds of cases in which the cure is almost the invariable sequence of the swallowing. It does not signify whether the thing swallowed is a great bolus or a pill of the size of a pin's head, containing an invisible dose.

Quinine is acknowledged, on the strength of a vast accumulation of evidence, as a remedy for ague. It cures ague in one grain, two grain, three grain doses. Will quinine, or anything else, in infinitesimal doses, cure ague as obviously in an equal number out of a vast multitude of cases? Will an infinitesimal quantity of sulphur exert any curative influence on that cutaneous affection which delicacy expresses by the euphuism of the Caledonian violin?

Mr. Punch's homœopathic friends seem to forget that statements of facts which are contradictory to common sense and received science, require rigid proof. None of them propose any method by which the active properties of an infinitesimal globule can be demonstrated. Neither homœopaths, nor mesmerists, nor spiritualists, either offer or accept the test of any *experimentum crucis*; and when Mr. Punch asks for it, they answer by abuse, and the comparison of themselves to Galileo, and those who laugh at them to the inquisition.

QUACKERY IN PARIS—THE BLACK DOCTOR—The Paris correspondent of the *Medical Times and Gazette*, under date of March 7, writes:—

"In medical circles, and indeed among all classes of the French metropolis, Dr. Vriès, better known under the name of the 'Docteur Noir,' forms the almost universal topic of the day. Is this Dr. Vriès a charlatan, and his system consequently an immense hoax; or is he really a scientific man, and the discoverer of a remedy for a disease, which up to the present time has continued an opprobrium to the healing art? are questions which in a few short months will be finally and decisively answered. The opportunities which have been publicly accorded to him of establishing his claim to be considered perhaps one of the greatest benefactors of the human race, are, through the instrumentality of M. Velpeau, such as no charlatan (if such indeed he be) ever before enjoyed; and should the experiments he is at present engaged in prove successful, M. Velpeau will be equally entitled to the gratitude of the world, for having laid aside for a time his preconceived notions, in order that a great and important fact might have an opportunity of being publicly proclaimed. Nor will the utter failure of M. Vriès diminish our sense of gratitude to M. Velpeau; because by the frankness and generosity of the latter a notorious system of imposture and humbug will be most effectually demolished, and its author will consequently be condemned for the future to speculate only on the credulity of the ignorant. I have all along believed that M. Velpeau was actuated by no other motive than the love of truth, when he invited the 'black Doctor' to a clinical competition in the treatment of cancer; and if I am correct, he is entitled to the utmost praise. But not a few of his professional brethren, without calling in question his motives, consider that his conduct has, to say the least of it, been rash and inconsiderate; and that his acknowledgment of Vriès, by inviting him to his wards, was an honor to which the position and precedents of the latter did not entitle him; and further, that it was giving him a footing in the estimation of the world, which he might turn to his own advantage, to the detriment of the honest practitioner, and, what is worse, to the mortal disappointment of many an unfortunate sufferer.

"These very evils, which certainly M. Velpeau did not foresee, are now beginning to develop themselves. Scarcely had the noise

of the *pretended* cure of M. Sax (for cure M. Velpeau does not yet consider it) ceased to ring in the ears, when forth comes another statement (by whom made or in what quarter it originated it is not difficult to divine) to the effect that the 'Administration des Hôpitaux, (and not M. Velpeau on his individual responsibility) had actually invited M. Vriès to undertake, in the wards of 'La Charité,' the treatment of certain diseases deemed incurable by the ordinary surgeons of that institution. Not content with this glaring perversion of the truth, M. Vriès, or some one interested in him, has caused to be inserted in some of the public journals certain paragraphs, wherein we are informed that his success in the hospital is beyond a doubt, sundry of the cases under his care showing not only marked symptoms of amendment, but inspiring the most sanguine hopes of complete recovery. M. Velpeau, who has all along been carefully watching the progress of these cases, and who has not been able up to the present moment to discover the slightest improvement in any one of them, was naturally much irritated by these falsehoods, and on last Thursday morning he attacked M. Vriès in no measured terms, while the latter was engaged at the bedside of one of his patients, and a scene ensued such as I never before witnessed in the wards of a hospital. Really it was painful and undignified, and yet, at times, it bordered on the ridiculous. Velpeau accused Vriès of wilfully perverting the truth, both in verbal declarations, and in newspaper paragraphs; of bribing the patients to conceal their real feelings in replying to the questions of medical men who visited them, and of having recourse to many other base subterfuges, with a view to the concealment of the truth, and the establishment of his own popularity. 'You were invited here, sir,' said M. Velpeau, 'in order that your system might be fairly tested; and on your accepting the invitation it was expected that you would act with a certain amount of honesty and good faith. This you have not done, and it remains for me now to assure you that I will not be your dupe. You, with great assurance, told me that you would cure all the cases which were then put under your care; but you have not succeeded in producing the slightest amelioration, in any one of them; and what is more, I feel justified, from what I have observed in adding that you will not cure one of them.' Mr. Vriès retorted by denying the charges made by M. Velpeau, and declared that the latter, through his 'internes' and nurses, had thrown every possible obstacle in his way; and that, should the same unjust treatment be persevered in, he would leave the hospital, and transfer all the concerned patients to a 'Maison de Santé,' where he would maintain, treat, and cure them entirely at his own expense. We should be sorry indeed were M. Vriès to carry his threat into execution, as, by his so doing, the very end M. Velpeau has in view would be most certainly defeated. In a large public institution like the Hôpital 'La Charité,' with the eyes of scientific men constantly on him, M. Vriès must, and assuredly will, soon be judged according to his merits or demerits—there, certainly, the truth will be made manifest. But if M. Vriès has recently had his troubles in 'La Charité,' he

has not been altogether free from annoyance at his own home. Denounced by some *kind friend*, his domicile was rudely invaded the other day by a Commissaire de Police and his satellites, who '*depar la loi sans cérémonie*,' laid an embargo on his goods and chattels, his nostrums and his stuffs, accusing him at the same time of an illicit exercise of a sacred profession over which the State had thrown its mantle of protection against charlatans, imposters, and, indeed, all men not duly authorized by the licensing powers of France. The poor doctor, whose assurance and self-importance are quite in keeping with the mission which he believes he was sent into the world to fulfil, waxed exceeding wrath, and, bounding like an angry tiger from one end of the room to the other, threatened to annihilate the presumptuous official and his gang. He declared that he was no charlatan; and throwing open the folding doors which communicated with the antechamber where his patients happened to be assembled, he exclaimed: 'There, gentlemen, are the living monuments of my science, and there the evidence of the healing virtue of my medicine.'

"In this motley crowd of patients, comprising individuals of all classes of society, and representing almost every variety of incurable disease, there chanced to be one whose good fortune it was to enjoy imperial favor, and whose face was not unknown to the police agent charged with the *razzia*. This party, overflowing with gratitude for the relief, real or imaginary, which he had experienced at the hand of Dr. Vriès, generously took upon himself the office of mediator, and finally succeeded in obtaining from the Chief of the State permission for him to continue the practice of his art for twelve months, together with a promise of a continuance of the privilege in the event of the experiments he is at present engaged in having a successful issue. * * * * *

"His house is crowded with patients from morning to night, and his receipts are said to be enormous. Whether from a conviction that the gratitude of a patient is greater under a promise of certain cure than after the cure has been effected, we do not pretend to say; but acting, we presume, in the belief of the former, he insists on being paid before commencing the treatment."—*Med. Times and Gaz.*, March 12, 1859.

From a later journal we learn M. Velpeau has made the *amende* for the false step he took in admitting into his wards a negro adventurer. In giving to the French Academy of Medicine an account of the failures of this charlatan, M. Velpeau said—

"If I had known that trials such as these of mine had been made with a negative result, by the same individual, at the Cancer Hospital in London; that he had done the same in the practice of M. Bazin at the Hospital St. Louis; if I had known of the mystic lucubrations of M. Vriès in the famous temple of the Champs Elysées—I certainly should not have taken the trouble to examine pretensions of such a stamp; but, ignorant of these details, and partly trusting to the good faith of these persons, I had the weakness to listen to them, and to open to them the doors of an honorable institution."

Sixteen patients were placed under the care of this empiric. One died at the end of ten days; in all the others the cancerous tumors have continued to increase in size and to multiply in number; and at the end of two months the patients are in as sad a state as though no treatment whatever had been adopted.

Clinical Lecture on Tetanus, Delivered at University College Hospital. By JOHN ERICHSEN, Esq., Surgeon to the Hospital.

GENTLEMEN: The case to which I wish to direct your attention to-day, and to which I purpose to append some remarks, on the subject of Tetanus, is that of a boy named B——, aged thirteen, who was admitted into this hospital on the 12th of December last, on account of sacro-iliac disease. I shall defer any observations which I may have to make on the affection for which he came to us until a future day, when this case will be taken in conjunction with other cases of sacro-iliac disease. But this case is of more special interest, inasmuch as, while here, the boy was seized with symptoms of tetanus, and eventually died of that affection.

The following are some of the leading facts of the case: The boy who appeared healthy and well nourished, and did not seem to labor under any congenital or constitutional predisposition to disease, became affected, six weeks before admission, with symptoms of sacro-iliac disease. On admission, nothing unusual presented itself in the symptoms, and our diagnosis was made at once. In the ordinary course of treatment, an issue was made, by means of potassa fusa, over the back of the articulation, in the usual way. After the separation of the slough, (about the fifth or sixth day,) a couple of issue-heads were applied to the ulcerated surface, in order to keep it open and cause a discharge. So far, there was nothing to lead us to suspect the coming evil. On December 24th, the report states that the patient had some stiffness about the jaws, and inability to separate them; there was also some commencing tension about the sterno-mastoid, and some spasmodic action of the muscles of the neck; in fact, on the 24th he was seized with symptoms of the invasion of tetanus. These symptoms increased, the muscles of the trunk and extremities became convulsed, symptoms of suffocation appeared, and he died on the morning of the 28th, in a fit of tetanic spasm, notwithstanding the treatment adopted.

Now, such an occurrence as this is, I need scarcely say, most appalling. A patient suffering merely from a local affection, with constitution unaffected, has an issue inserted in the ordinary course of treatment, and in a few days gets, as the result of that issue, (and, unquestionably, it is the result of the issue,) a disease of which he speedily dies. Such an occurrence would, indeed, be as remarkable

as it really is mysterious, were it not that similar ones are by no means infrequent. In fact, surgeons have learned to look upon tetanus as one of those affections which necessarily give rise to an appreciable percentage of deaths in patients suffering from injuries or operations.

With regard to the disease which destroyed the life of this patient, viz: tetanus, I shall say nothing concerning the symptoms, because they exhibited nothing peculiar; but I intend to pass in review a few points connected with its cause, its nature and its treatment.

1. *Cause*—Individuals may, doubtless, be seized with tetanus, although not having any breach of surface; but, in the vast majority of cases, the affection comes on as the result of wounds of some description, and these, very generally, wounds of a trival character. Thus, it does not so commonly follow compound fractures of the thigh or leg, as it does minor injuries of the extremities; nor is it so frequent after amputations, re-section of joints, or the removal of large tumors, as it is after minor operations; so that it may be looked upon as most commonly resulting from minor surgical injuries and operations. On looking over a list of the cases which have been under my care in this hospital, I find that, in not one has tetanus come on as the result of the major operations, or more severe accidents, but such injuries as punctures, and compound fracture of the fingers or foot, lacerated wound over the wrist, or a burn on the trunk, are amongst the injuries giving rise to it. So far as operations are concerned, although it may certainly occur after the major operations, it has generally followed such operations as those for varicocele, fistula in ano, ligature of piles, &c., all of which are quite as liable, if not more so, to be followed by tetanus, as the severest operations in surgery.

With regard to the general causes of tetanus, it is, no doubt, predisposed to greatly by the season of the year, and by epidemic constitution. At those periods and seasons when there are great alterations of temperature—when hot days are succeeded by cold nights—tetanus becomes frequent. In hospital practice, there may be no case for months; then several may occur in rapid succession. The week before this boy died, I saw, not a quarter of a mile from this hospital, another case which also ended fatally. The circumstances in which the patient is placed, exercise great influence; it may occur in the old as in the young—in the weakly as well as in the robust. So far as my experience goes, it is more frequent amongst young adults and elderly people, than at the middle period of life; more frequent amongst the weakly than the robust. Indeed when a person, apparently in robust health, is attacked, it will generally be found that, previously to the supervention of tetanus, he has been subjected to some depressing influence—has been out of health in some way, and has lost tone and vigor.

One of the most important causes of tetanus, especially in military surgery, and, probably, a not unfrequent one in civil practice, is exposure to alterations of temperature and currents of cold air.

Hennen, states that this was the most frequent cause of tetanus amongst the wounded in the Peninsular War. Larrey, observed the same in Napoleon's campaigns. After the battle of Bautzen, a large number of wounded were left upon the field, exposed to the cold night air. Next day, a considerable proportion of those were found to be affected with tetanus. After the battle of Dresden, the same thing was observed; whilst after Moskowa, where the night was warm, although the number of wounded was immense, the proportion of tetanic cases was very small. In our Indian campaign's at Chillianwallah, and at Ferozepore, the wounded after severe exertion under a burning sun, were left exposed during an exceedingly cold night, and according to Dr. McLeod, in a very interesting work called, *Notes of the Surgery of the Crimean War*, which I can strongly recommend for your perusal, the result was a large number of cases of tetanus. M. Baudens, again, the chief surgeon to the French army in Algeria, noticed that out of a small number of wounded placed in a corridor through which played a draught of cold air, a large proportion were seized with tetanus in a single night. All these points to the importance of our not allowing wounded or operated patients to be exposed to draughts of cold air.

The number of cases of tetanus, in proportion to the number of wounded, varies in civil and military practice, and in different climates, &c. Mr. Rutherford Alcock, who accompanied General Evan's expedition into Spain about twenty-five years ago, gives the proportion of tetanus to wounded as 1 to 79. Sir J. M'Grigor, in the Peninsular War, found it to be 1 to 200; and in the Schleswig-Holstein campaign it was, according to Stromeyer, 1 to 350. In the Crimea, so far as we judge by official returns, the proportion of tetanic cases was very small. These discrepancies are, no doubt, due to the different conditions under which the soldiers were placed. Thus, in the Crimea, being engaged principally in siege operations, the wounded were not left exposed during the night, but were removed at once, and put under cover; and in the Schleswig-Holstein War, each army, being close to its base of operations, could take adequate care of its wounded, who, therefore, were not exposed to those conditions which military surgeons recognize as the most potent causes of tetanus.

As I have already stated, the proportionate number of deaths from tetanus varies widely in different climates. At Bombay, according to Mr. Poland, (who, in a very able paper, has exhausted the statistics of tetanus,) it is 2.5 per cent. of all deaths; in London, according to the Registrar-General's returns, .0025 per cent. This preponderance in Bombay is, no doubt, owing to the heat of the climate; but it must be observed that the proportion is not nearly so great among the Europeans there as among the natives.

The situation of wounds: Has this any influence in determining the occurrence of tetanus? It is a prevalent opinion, both among non-professional and professional people, that wounds of the hand, particularly those of the thumb, and, above all, those of the web between the thumb and index finger, are more prone to be followed

by tetanus than wounds elsewhere. Whether this be true or not, admits, I think, of great question. That the hands are much more liable to injury, and are much more frequently wounded, than other parts of the body, is evident, and the absolute number of cases following such injuries, would, therefore, be expected to be greater; but whether the *relative* number is greater is questionable. On looking over my notes of eighteen cases of tetanus, which have come under my observation, and of which I have kept a record, I find that in five of the eighteen the hand was the seat of injury—that is, a little more than one-fourth; but this, I should say, is about the proportion which injuries of the hand, including those of the most trivial character, bear to injuries of all other parts of the body.

2. *Nature*.—The exact nature of tetanus is an unsolved question. Nothing appears more mysterious than an affection such as this, which often seizes an otherwise apparently healthy person suffering from some slight injury, with the more violent convulsive spasms terminating in three or four days, or in even less time than that. We have to inquire into the condition of the nervous system, on which such a disease as this is dependent. On examining the brain and spinal cord, we find nothing special to the affection—no lesion which would enable the most experienced pathologists to say that the person had died of tetanus. It is true, that we often find some congestion, or softening, as in this case, just above the cauda equina, or a large amount of serosity in the ventricles or subarachnoid space, which may be turbid or bloody; but all such appearances are common to other diseases besides tetanus, and none of them will enable us to assert the existence of tetanus during life. Look at the brain and spinal cord before us. They are, to all appearance, perfectly healthy, with the exception of some slight congestion, and a small softened patch in the cord, just above the cauda equina. They present no special appearance, no sign by which the acutest pathologist could, by any examination, anatomical or microscopical, say that they came from a tetanic patient. Finding no structural lesion post-mortem, medical men have been in the habit of calling this, in common with other diseases, of which the exact cause is alike unknown, a “functional disease.” But the term “functional disease” is only used as a cloak to ignorance; there is no such thing as a functional disease, and the person who uses the expression merely means that he does not know the organic lesion on which the disorder depends. Every function is the result of the action of an organ; every derangement of a function is the result of the derangement of the corresponding organ; and no function can be deranged without previous or co-existing derangement of the organ whose action constitutes the function. As pathology advances, the class of “functional disorders” becomes less and less. We do not now hear of functional disorders of the heart, lungs or joints, because the pathological anatomy of those parts being well understood, it is possible to refer their diseases to the real cause. As the physiology and pathology of the nervous system are not yet well ascertained, notwithstanding the labors of such men as Marshall Hall and

Brown-Séquard, many affections of that system are at present inexplicable, and "functional" nervous disorders are very common. So surgeons speak of "functional" coma, because the particular cause (compression) of the coma is well known, and easily recognized; but one still hears of "functional" amaurosis, and tetanus is commonly spoken of as a functional disease. Amaurosis, when I was a student, was looked upon almost solely as a "functional" disorder; but the introduction of the ophthalmoscope has shown that in most cases where functional disease was formerly said to exist, there is, in reality, some structural change in the nervous apparatus of the eyeball, appreciable by the naked eye. So it will be with other affections, as pathology advances; and disease hitherto vaguely and loosely spoken of as functional, will be found to depend on organic changes, as appreciable by the senses as are the changes in an amaurotic retina and choroid.

Yet, there is in traumatic tetanus, I believe, always a certain condition of the nervous system to be met with, if carefully looked for, namely, an unhealthy state of the nervous branch, or twig, running from the wound. This twig will be found implicated in some way—congested, inflamed, infiltrated; its neurilemma thickened, softened, and discolored, often for a considerable distance from the wound. I have never failed to find this when it has been carefully looked for. In the present instance, a cutaneous branch was found lying bare, and inflamed in the bottom of the issue-wound. In many other cases, I have seen the same. Thus, in the case of a girl who had tetanus, consequent on a small punctured wound on the inner side of the thigh, near the knee, a branch of the internal cutaneous nerve was found in this condition. I have seen injury to the internal plantar nerve, by treading on a rusty nail, followed by tetanus, and the nerve after death found irritated and inflamed. A dorsal cutaneous nerve was implicated in a case of tetanus, following a slight burn on the back and the external cutaneous branches of the musculo spiral were affected as high as the bend of the elbow, in a patient who died from tetanus, following injury to the thumb. A similar condition of these nerves was observed in a man with lacerated wound over the wrist. These and other similar cases which have fallen under my observation, clearly demonstrate, that although we may fail in discovering any special lesion in the central nervous system, yet, that in most, and—so far as my experience goes—in all cases in which the examination is carefully conducted, it will be found that a nervous twig, connected with the wound, is irritated and inflamed; and this seems to be the starting-point for this so-called functional disease. An organic lesion, not central, but peripheral, still exists, as essential to the production of the affection.

3. *Treatment.*—With regard to the treatment, I need say very little, and that little is in no way satisfactory. The case we are now considering followed the usual course of such attacks, beginning with the stiffness of the muscles supplied by the portio dura, violent general spasms coming on in the course of twenty-four hours, and death occurring between the fourth and fifth day. More than half the

cases of tetanus die before or on the fifth day of the spasms. If the patient survive that time, the symptoms tend to become milder, the disease may wear itself out, and recovery follow. I have seen death occur in less than thirty hours, and as late as the twentieth day; so that the fact of the attack being very chronic is no proof of its innocency. Acuteness of attack, however, is a sure sign of great danger. So, also, the sooner the symptoms come on after the infliction of an injury, the greater is the danger, and more speedy the fatal issue.

In considering the treatment of tetanus, we must divide it into that of the acute or active, and of the chronic or sub-acute form. In the treatment of *acute* tetanus, I believe that no remedy known exercises the slightest *curative* influence. To drug a person affected with active acute tetanus, is, in my opinion, utterly useless. I have never seen nor heard of a case cured by the routine treatment, the sooner we abandon which, I think, the better. Calomel and opium, in large doses, the vegetable sedatives, belladonna, conium, henbane, opium, or camphor, largely administered, are all unavailing (when the disease is acute) in retarding, mitigating, suspending, or arresting its progress. If we are ever to cure acute tetanus, we must give up this line of treatment, which we have been taught by experience to be useless, and endeavor to discover some new principle to guide us in the management of this affection. Yet acute tetanus may be cured, though not, I believe, by medicine; and much may be done to mitigate suffering. *The first thing to be done is to divide the nerve leading from the wound, where it can be found and isolated.* The wiser plan would be to *divide the trunk of the nerve high up in the limb*, so as to get beyond the sphere of the local irritation, which appears to be the chief organic lesion discoverable in these cases. Patients have been cured by this means. Mr. Murray (the surgeon who tied the abdominal aorta) relates the case of a midshipman, who received a wound in the foot from a rusty nail; tetanus came on; Mr. Murray divided the posterior tibial nerve, and the patient recovered. Such cases give hope of being able to save others, and this operation should therefore be done at once, where practicable. It is not, however, by any means, invariably successful. Last session, I divided, without success, however, the branches of the external cutaneous for tetanus, following a wound of the back of the hand.

In the general management of the patient, we must remember that we have an exhausting disease to deal with; the patient sweats profusely during the intervals of the spasms, and will soon sink if not supported. All external causes of excitement should be removed from about the patient; he should be kept perfectly quiet, his bed surrounded with screens or muslin curtains. In addition to these means, the occasional inhalation of chloroform will alleviate, though it will not cure, acute tetanus.

In *sub-acute* and *chronic* tetanus, the case is different. If the patient survive the fifth day, and the affection assume a chronic or sub-acute character, we may entertain some hope of his recovery. He should be kept quiet—his strength supported. Terebinthinate

enemata, calomel with opium, belladonna, or conium, are the remedies to be employed. Many patients have got well under, and seemed to be cured by this plan of treatment. Cannabis indica, ether and chloroform have also been recommended, but not alone to be trusted to. At all events, calomel and opium, and if you like, belladonna also, may be given with advantage. You may also feel disposed to try the effect of the sedative alkaloids. I am not aware of any cure having resulted from their use; but atropine, applied liberally, has been beneficial by mitigating the pain which the patient suffers. Such alkaloids, or the corresponding vegetable extracts, may, therefore, be applied with benefit.

To sum up : it appears that the *best prospect* of a cure is to be found in the *division of the nerve* leading from the seat of injury, wherever this is practicable; in the employment of proper hygienic and dietetic means; in the removal of all sources of external excitement and irritation, local and constitutional; and in the administration of moderate doses of calomel and opium, with turpentine enemata. Such measures as these, I say, appear to be more rational, and to hold out a better chance for the patient than the empirical administration of specific sedatives, which experience has repeatedly proved to be unavailing in curing the disease, and often even in mitigating its sufferings.—*London Lancet*, Feb. 26th, 1859.

WILLIAM AND JOHN HUNTER.—In an account of William Hunter, in the *Lancet*, occurs the following comparison of these brothers:—"On the continent, we believe the name of William Hunter stands in estimation before that of John. In this country, if a Hunter is named, everybody is meant. Some men here, however, have been bold enough to take the continental view. In the pages of this journal, last year, Dr. Priestly, in his able lectures on the gravid uterus, ventured the idea that on looking into the labors of William Hunter, one is tempted to think that for profundity of observation and true sagacity, he was, in no respect, the inferior.

There must, nevertheless, be a cause for the popularity of John in this country—and a cause there is—but the cause lies not in correct public estimation of the scientific works of the two brothers.

* * * * * But if, by these presents, we can induce our readers to peruse carefully the lives and works of the two Hunters, and to draw their conclusions on the ground of scientific merits alone, the statement underneath will receive, we predict, a universal sanction :

The brothers Hunter were twins in Science, but William was the first-born.

William was not only the *first-born*, but was also possessed of the great advantage of finished scholastic training, before entering upon his professional studies; while John had not acquired even a correct

acquaintance with the common rudiments of the English language, before beginning to lay the anatomical foundation upon which his magnificent and enduring professional reputation was subsequently erected. *He made "foot-prints on the sands of time."* H. L. B.
 [Oglethorpe Med. and Sur. Jour.]

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

On Poisons, in relation to Medical Jurisprudence and Medicine.
 BY ALFRED S. TAYLOR, M. D., F. R. S., Fellow Royal College of Physicians. Hon M. D. University St. Andrews, Member Royal College Surgeons, etc., etc. Second American, from the second revised London edition. Philadelphia: Blanchard & Lee, 1859, pp. 755.

This edition of the work differs materially from the former one. Many chapters have been struck out, and about an equal number introduced, in order to make it conform to the progress of the age, and subserve the purpose of medico-legal inquiries.

The author states that he has not attempted to give a distinct notice of every substance which has been known to have a poisonous or noxious action on the animal body; but has devoted most of the space to the consideration of substances which, from the frequency of their employment for murder and suicide, are of great practical importance.

We are told that no one can draw a definite boundary between a poison and a medicine. The greater number of poisons being useful as medicines when properly employed; and no substance in the catalogue of medicines but what may be converted into an instrument of death, if improperly administered.

The work contains chapters xliii

The following are the subjects discussed:

"1. Nature of poisons. Their mode of action, Absorption, Influence of habit, Classification, etc.

"2. Evidence of Poisoning in the living body. Diseases resembling Poisoning.

"3. Evidence of Poisoning in the dead body. Evidence from Chemical Analysis. Experiments on animals. Statistics of Poisoning.

"4. Mineral Acids, Oxalic Acids, Alkalies, and Alkaline Salts. Phosphorus.

"5. Arsenic, Mercury, Lead, Copper, Antimony, Zinc, and other Metals; Vegetable and Animal Irritants.

"6. Narcotic or Cerebral Poisons—Opium, Prusic Acid, Alcohol, Chloroform, Camphor, Tobacco, Cocculus Indicus, Darnel, Mushrooms, Henbane.

"7. Nux Vomica, Strychnia, Brucia.

"8. Hemlock, Ceanothe, Monkshood, Belladonna, Lobelia, Foxglove, Thorn-apple, Laburnum, Yew.

It is exceedingly difficult to give a definition of a poison. It is commonly regarded as a substance which, administered in small doses, destroys life. This definition is too restricted. There is, as stated by the author, a large class of substances which, although not entirely deleterious in small doses, are so in large ones. "We may admit the general truth of the doctrine, that a poison in a small dose is a medicine, and a medicine in a large dose, is a poison."

It matters not, therefore, whether the dose be large or small, if death is caused by it, the responsibility of the person who criminally administers it is the same. It is just as criminal to administer an over-dose of common salt, or epsom salts, as an over-dose of strychnia.

"In reference to the *medical definition* of a poison, it is necessary to observe that the law does not regard the manner in which the substance administered acts. If it be capable of destroying life, or of injuring the health of an individual, it is of but little consequence so far as the responsibility of the poisoner is concerned, whether its action on the body be of a mechanical or chemical nature.

If the substance criminally administered destroy life, whatever may be its nature, or mode of operation, the accused is tried on a charge of murder or manslaughter, and the duty of a medical witness consists in showing that the substance taken was the cause of death. If, however, death be not the consequence, then the accused is tried under a particular statute, for the attempt to murder by poison.

We have a very valuable chapter on the *Influence of Habit on Poisons*. Nothing is more generally known to physicians than that *habit* diminishes the effects of drugs. That an article taken for a certain length of time loses its power, and requires to be administered in much larger doses. The same influence is manifested in the use of opium, tobacco, alcohol, arsenic, strychnia.

It is hardly probable that we fully appreciate at present the extent of opium-eating in our country, or the influence of the practice upon

the organism. While there is no probability that there is more opium now required in the treatment of disease than formerly, the consumption of the article has increased very much above what can be explained by a mere increase of population. Such is the testimony of druggists. Indeed, it is very certain that the medical use of opium has in our day rather diminished. We think more of the article in certain emergencies than ever, but have limited the range of application. In very many too of the cases which require large doses, it has been superseded by ether and chloroform.

The cases of opium-eating there is reason to believe are more frequently connected in origin with the medical use of the article than has generally been suspected. We have some experience of our own on this point. A patient of ours who had intense pain that had resisted for months all remedies except opium got so in the habit of using the article that he was unwilling to do without it, after the indications for its medical use no longer existed. This is the simple history of a great many of the cases of opium-eating in the land, and hence the care necessary on the part of the physician. We have no room for the very instructive remarks of the author on the influence of habit with respect to other articles noticed.

The question of Habit has been raised occasionally in medical jurisprudence in this shape: Whether, while the more prominent effects of the poison are thereby diminished, the insidious or latent effects on the constitution are at the same time counteracted. It must be answered that habit cannot counteract altogether the insidious effects of poisons, and that the practice of taking them is liable to give rise to disease, or impair the constitution. This is not only true of arsenic, strychnia, etc., but also of tobacco and alcohol. How many of those who are in the daily habit of using these articles appreciate the fact that they are using, to say the least, substances that impair the constitution. There is no reason to believe that the effects of tobacco are any more in harmony with physiological laws than the effects of arsenic.

A Manual of Elementary Chemistry, Theoretical and Practical.
By GOE. FAWNS, F. R. S, late professor of Practical Chemistry in University College, London. From the seventh Revised London Edition; Edited by Robt. Bridges, M.D., Prof. Chemistry in Philadelphia College of Pharmacy, etc. Philadelphia: Blanchard & Lea, 1859, pp. 600.

It is some ten years or more, since this little volume made its first appearance in this country—since that time it has steadily advanced in popularity. While it makes no pretensions to be considered a complete treatise on this subject, it nevertheless embodies almost every thing that the student needs philosophically arranged and happily condensed.

Throughout it has been the author's aim to render the book as practical as possible, by detailing at as great length, as the general plan permitted, the many of the working processes of the scientific laborator, and by exhibiting by the aid of numerous wood engravings the most useful forms of apparatus with their adjustments and methods of use.

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

OHIO STATE MEDICAL SOCIETY.—The proceedings of this body will be found elsewhere, in the present issue. The late meeting was, in many respects, the most successful one the Society has ever had. It really seemed that the profession, by almost common consent, had at last comprehended the necessity of undertaking to sustain the organization, by doing some *work*, in the way of scientific contributions. The time was most assiduously improved, mainly in reading and discussing reports, volunteer papers, &c., some of the longest of which could only be presented in abstract. Strange to say, the “points of order” gentlemen, who so frequently afflict such meetings, were not present, or demeaned themselves with becoming modesty—the mighty “wind-works” were not on exhibition—the “claims” of any such gentlemen as from slight mistaken conception, perhaps suppose the object of all such organizations to be the manufacture of giants from pigmies, whales from tad-poles, or men of science from the raw material, were neither recognized nor

considered. The Society did its own work, elected its own officers, conducted its business in a business like way, and adjourned when it got ready.

For months past it has been a serious question with us and others, what course we should take in reference to this organization. In our judgment, it had become discreditable to the profession of the State; a mere machine for advancing the lighter material of the profession, to a little paper notoriety, and the notice of their fellows. Lest we be misunderstood, we will be more specific. Gentlemen, at their personal request, have been accustomed to occupy prominent places on the special committees, and to be kept there, from year to year, without lifting a finger toward doing the work imposed, or exhibiting the slightest evidence of their ever having intended to do so. In some cases, they have even imposed upon the Society the shameful farce of giving verbal abstracts from reports never written, and probably never designed to be. Most of the committees were never heard of after they were designated, in a large majority of cases neither attending the meeting to which their report was due, or apologizing for absence. Even under these circumstances the Society has often, at the suggestion perhaps of some sympathizer, acting in recognition of the mutual titillation principle, perpetuated the farce, by failing to put a heavy and indignant heel upon the offender. We are inclined to think that this game is played out, and that in future, when the meeting comes around, gentlemen will be expected to come up to the captain's office and settle, or take lower seats in the synagogue. The policy of the organization has, furthermore, been such as to lead to the assertion and recognition of claims to its offices, without regard to special fitness, on the part of the claimant. In our judgment, this is one of the great secrets of its inefficiency. Take the office of Secretary. We have no present recollection, that any gentleman has ever occupied this post, who was not well qualified for the ordinary duties of such an office. Being elected, he acts during the session of the Society, and perhaps acceptably. The Society adjourns. He has never acted, in many cases never attended before, and of course has no knowledge of the practical working of the concern, and perhaps does not know but that the adjournment ends his labors. Suppose he acts accordingly, as frequently has been the case. The duties of the publishing committee are of necessity imperfectly performed. The special committees are never notified of their work, and the result is there is an *apparent* excuse for

short coming, of which the jack o'lantern sort of gentlemen rarely fail to avail themselves. The interests of the Society call for a change in this matter. It needs to do its own work, hunt up its own men, and when it finds a man who is willing to qualify himself, by the requisite study of its operations, to do the work associated with such a post, its interests require that he should be continued in office as long as its honors are estimated as being an adequate compensation for its labors. Similar remarks, would apply to other officers, especially to the treasurer and librarian.

We have recently been carefully engaged in feeling the professional pulse in reference to the professional estimate of the Society. There are worthy members of the profession, who, disappointed in their too high expectations, and not recognizing the necessity of the saints' perseverance, have already retired from the effort to sustain it, in disgust. One former zealous and efficient member, predicted that the present meeting would be called upon to perform the funeral obsequies, and long since provided himself with the habiliments of mourning. Others, in large numbers, absented themselves, to our personal knowledge and belief, because of the apprehension that the time of the meeting was to be occupied in zealous and pathetic exhibitions of regard for a revered, but flagrantly infringed code of ethics. Some, undoubtedly, staid away because they were unwilling to witness the crucifixion of an erring professional brother. From these and other circumstances, the number in attendance was not equal to that of five or six years since; but, still, it was good. The promising feature, in our estimate, is, that the meeting consisted largely of the bone and sinew—the laborers of the profession—who came up from all parts of the State with a *hearty determination that the Society should be sustained*. We have no sort of notion that this Society, or any other voluntary or involuntary organization of the profession, is to do any thing miraculous, or even wonderful, in the way of elevating the profession. The work that many sanguine, but impracticable and mistaken men, are constantly devolving upon “State and Local Societies,” and the “American Medical Association,” will never be done. All such organizations have enough to do to preserve their own dignity and purity, and frequently more than they can do to maintain their own decency, even. It seems to us that sensible men, not especially prone to self-delusion, would look in almost any other direction for a process of regeneration and sanctification for the great body of the profession. This is a work that is not to be done in the aggregate. It is a personal work—per-

sonal to each and every member of the profession, present and prospective—to effect which, the intelligence and tone of every community containing a physician, needs to be improved; every stimulus afforded by association and organization employed, and such facilities secured by individual candidates for its honors as may be necessary to attain such standard as the public and professional sentiment erects and sustains; over most of which such organizations have but little control. But such societies can, at least, stimulate and encourage to thought and labor. This, in our estimate, is the beginning and end of their work; whatever else they do, is only valuable as it is tributary to this. We have no machinery by which we can direct and control, either our self-respect, or the respect and confidence of the public. There is a homely appliance, however, by which all these may be attained. It is simply, *faithful, honest, hard work*. Although this contains none of the poetry with which the sanguine and chimerical are accustomed to amuse, beguile and delude themselves and others, yet, in our judgment, it contains the *whole philosophy* of these organizations. Deprive them of this, and they are both powerless and worthless. Make them efficient as inciters to labor, and they are invaluable. Because we believe our Society can be made, if it is not already becoming such, we hold up two hands for sustaining it. We rejoice to say, that we are convinced that the number and character of those who have formed the firm resolve to merge all considerations relating to self, friends, or enemies, into those relating to the decency, good name, and dignity of the Society, and the profession of which it is the exponent and representative, is such that it will not merely be sustained, but brought up to a point at which it can *justly challenge respect, or even admiration*.

To all such as are becoming weary in well doing, or hesitate, and are disposed to fall out by the way, we simply say, as Moses to Hobab, “come with us, and we will do thee good, for God hath spoken good concerning Israel.”

We would especially make this appeal to the younger members of the profession. Let us vie with each other in labors and sacrifices for this representative and exponent of the respectability of our brotherhood. Let us make this, too, a generous and honorable rivalry—a rivalry, which, oblivious of self, not only abhors the idea of doing an injustice, but cheerfully and even gladly concedes to every brother the fullest award for his labors and merits. We have

not arisen to a full conception of ourselves as honorable and high-minded men, till we would spurn, as a thing to be despised, any award which does not belong to us, or deprive our brother of that which belongs to him. Our compeers, by the bestowal or withholding of such award, may be led to a false estimate of us, and of him; but not so in the secrecy of our own hearts. Here every man, cherishing a full measure of self-respect, keeps an account with himself. If there is within a consciousness of deserving well of our fellows, the recognition of such merit by them, cannot but be grateful to an honorable mind. Whatever we may secure by means at all attained with dishonor, is but trash—*food for fools*—fit only to be cast under foot, spit upon, and despised. H.

*A Veteran "Elevator," "Elevating the Profession of Medicine,"
and the American Medical Association to his level.*

"Elevating the profession," has become not only a pet phrase, but an interesting business. In Ohio we understand it perfectly. We have a veteran "elevator" among us who can scarcely get within sight of a medical auditory without evincing an ardent desire for the "elevation," of the profession. He is accustomed to place himself in positions, in reference to us, that would seem to intimate that he would like to be the recipient of a little consideration. Under all ordinary circumstances, although our habitual good nature and kindness would allow us, (our notions of propriety coinciding,) to do almost any thing to accommodate, yet we have uniformly declined, for abundant and self satisfactory reasons, to do so.

At the recent meeting of the American Medical Association, this gentleman did so much by way of laying claims to consideration—paid so big a price for it—that it would be illiberal, perhaps *unjust*, even on account of considerations of self respect, or respect to our journal and its readers, to withhold from him that which, of right, belongs to him. Asking pardon of our readers, for the offense which we thus commit, in bringing a matter, which in some of its bearings is slightly personal, into our pages, we name the gentleman. It was our fellow townsman, Dr. Robert Thompson, a man who, as our neighbor, and on account of his age, we would like to speak of in terms as kind, as is our habitual treatment of him. He stated, at the meeting alluded to, that "he knew a

medical college which recently graduated a man, for the sum of thirty dollars, whose best friends did not know that he was engaged in the study of medicine, but supposed that he had left home on a friendly visit." After thus delivering himself, he called a dead halt, and turning about, looked over the audience imploringly, evidently on search of some one who would kindly relieve his extreme modesty, by "forcing" him to name the institution. This touching appeal found a response. Some one cried "name the institution." In an ecstasy that evidently well nigh overcame him, such as always characterizes his "elevations," he cried out stentoriously—with a climax that he rarely fails to use when he is about "elevating," "STARLING MEDICAL COLLEGE," and then with an air of triumph, he took a characteristic look at us—such as he usually does after his efforts to "elevate" us to an altercation—and by which evidently he intended to say, "*now, sir, you will not only give me some attention, but you will froth like a Dutchman's beer bottle with the stopper out!*"

Unkind and singular as it may seem, thus to deny the pressing wants of our neighbor, we didn't "froth." We simply resumed the reading of our newspaper, and took the same course that we should have taken at home, if he had made the same or any other statement, under oath, or otherwise; we paid no sort of attention to it, confidently calculating that he would not allow the two or three days of the session to pass without giving the most satisfactory explanation, by his conduct, for the course we took. On his next appearance for a speech, however, much to our disappointment, and as a very singular coincidence, there was a rumbling from the floor, slightly like that of rather rapidly approaching thunder, which being renewed as often as the "Mr. President" seemed to be construed by the aspirant for a speech, into a gentle hint that, perhaps, the Association thought he had spoken often enough. Unfortunately this, or something else, deprived us of the benefit of the explanation which we expected the Association to derive from additional exhibitions. An injustice was thus done us, for which, if the Association really did perpetrate the thunder, and we should give it an opportunity, we suppose, of course, it would yet ask our pardon. Hence is suggested the propriety—if not enforced the necessity—in duty to a public institution, and from a slight veneration for the great American Medical Association, and a willingness to do a mite towards purging its future of indecencies, but without the slightest regard to our personal relation to the transaction—of meeting this matter in a different way, one much less effective, and far less congenial to our feelings.

This we do without making any special draught upon our supply of blandishments, by replying in what we regard as sufficiently polite, but rather unpolished terms, that in LETTER and SPIRIT, from BEGINNING TO END, it is FALSE: and as far as he is *capable of knowing anything*, we have not the slightest doubt, but, he KNEW it was false, when he uttered it!

Now what is the explanation? Why should an old man—evidently not far removed from the termination of his active career—among strangers—in a convocation of gentlemen embodying much of the dignity and learning of a profession which he professes to love and serve—in the presence too, and evidently, prominently for the purpose of *damaging* a neighbor and fellow-townsmen, one at whose hands, even within a few hours previously, he had been the recipient of special acts of kindness—one who would like to love him as a father, and revere him as a patriarch—who would gladly, if he could consistently, sympathize with, sustain and honor him—who is incapable of any but kind feelings towards him, if he seems *willing* to deserve it—why should he, under such circumstances, do violence to his manhood—to the dignified body he is addressing—to every consideration of propriety, by such an *indecent* onslaught upon an important public institution of his own profession, State and city?

Our brethren, we doubt not, have already answered in their own hearts, that “the secret can only be found in professional depravity, the ripening fruit of the inveterate indulgence of professional ignorance, envy, malice and rascality.”

On account of gray hairs—of a worthy family and connections, and of the good name of the profession, and citizens of our city, who have hitherto—and we think honestly and properly—thought best to tolerate and sustain at large; on account of all these, and other considerations, and because our heart prompts us, we ask our brethren to interpose the mantle of charity and abate these hard epithets. Call it an idiosyncratic and chronic, but ardent desire for the “elevation.” Or if this is either too stale or too newly coined, call it *genius* or *eccentricity*,—that kind, if *must* be, which largely disqualifies a man for the observance of all ordinary *decencies* and *proprieties*, and unfits him alike for telling the *truth* or a *falsehood*—for doing *right* or *wrong*.

That there is, at least, some ground for the claim which charity interposes in behalf of our neighbor, could be easily verified. The

most striking evidence of it, involving as it does, some unpleasant hepatic reminiscences,* we prefer, till science and humanity demand, not to adduce. Indeed it was impertinently suggested on the ground that with six slightly billious words, we could paralyze his tongue forever, so far as the American Medical Association is concerned. But the very suggestion struck us with horror. Suppose we had done it, who would do "elevation" for that body, and for the Ohio State Medical Society? "Nature abhors a vacuum."

And now, in conclusion, our little one-edged sword has so long laid away in its scabbard, and has become so dull and rusty, that we are rather ashamed, even in defence of a public institution, and with a foeman worthy of its little steel, of having unsheathed it. In fact we had almost forgotten that we ever had one. It is such a trifling thing, and so hateful, and the use of it so incongenial, that really we feel disposed to bury it out of sight. The use of it, in our boyish way of looking at things, is unbecoming those who aspire to consideration, as men of science. We prefer to provide ourselves in true hibernian stile, with pick and spade, and bring our profession *up* by digging *down*. And if, perchance, we are permitted to dig about and dung our professional brother, if we can only be the means of causing him to take new root and a new set, to acquire new vigor—a vigor which shall give buds and blossoms in spring; verdure in summer; fruit in autumn; endurance in winter, and strength, symmetry, and sublimity all the time—a sublimity suggestive of

"Some tall cliff that lifts its awful form,
Swells from the vale and midway leaves the storm,
Where round its breast the rolling clouds are spread,
Eternal sunshine meanwhile settling on its head,"

Oh! how we shall bathe our spirit in delight to see those swelling buds—to enjoy fragrance and beauty from those flowers—shade from that foliage—to eat of those fruits lean upon that

* See Ohio Statesman of Nov. 10, 11, 12, and 22, 1847, for the report of the "appalling operation of removing the entire liver," "weighing 29½ pounds on a farmer's steelyards, being avoirdupois weight," "life was prolonged" several days to "develope new and important light in physiology, and serve to show, as Sam Patch says, that some things can be done as well as others." "On our way out, an old gentleman who met us, humorously observed, that livers must be 'risen,'" i. e., we suppose, "elevatin."

We did not intend to make these quotations, but by some injudicious and very imperfect anticipations, we were "forced to do it."

strength, and be awed and inspired by that sublimity! How delighted would we be to impart all this with a word or a wish—thus covering our professional pigmyhood with the protecting shadow and blessing of a worthy professional giant and father—thus terminating our professional orphanage! But delicious as might be the consummation, we cannot, for the hope it sets before us, except thus temporarily, make a descent from the sublime to the ridiculous, but since the “elevating” influence, of this “elevating” topic, has “elevated” us to these sublime “elevations,” we feel like growing “elevatener” and “*more elevatener*,” and, if possible, making our “ELEVATENEST ELEVATION” the “MOST ELEVATENEST” of all.

H.

NORTH CAROLINA MEDICAL JOURNAL.—This is a new Journal, published at Edenton, North Carolina, under the auspices of the North Carolina State Medical Society. It corresponds in size, frequency of publication, &c., with this Journal. It is under the proprietorship of our friend Dr. Edw. Warren. We are much mistaken in our estimate of the abilities, industry and scholarship of the proprietor, if this does not prove a successful enterprise. All that is needed, is that which we suppose he already has, a hearty co-operation on the part of the profession. We heartily wish our friend and his enterprise great success. We had hoped to enjoy the pleasure of presenting our readers with more than this hasty notice, but the crowded state of our pages, growing out of the demand of the National Association, and State Society, restrict our limits. We place it on our exchange list, and promise our readers that they shall hear from it again.

H.

Convention of Medical Teachers.

Our readers are aware that at the meeting of the American Medical Association, held last year in Washington City, it was resolved that there should be a National Convention of the Medical Teachers, to convene the day before the meeting of the Association, in Louisville, Ky.

The object of this meeting was to take charge of the subject of Medical Education in the United States; to prescribe rules and reg-

ulations by which the Colleges should be governed in conferring degrees.

We have noticed, from time to time, the progress, in the National Society, of this question of Medical Education." It is a question around which every thing else, in a measure, has been made to revolve, and in regard to which there has been no small amount of speculation, empty, impracticable talk, etc.

All the Medical Colleges of the country, we suppose, are, and have been, willing to listen to suggestions from any quarter, in regard to "elevating the standard of medical education. But that they will suffer themselves to be dictated to, or allow any body of men in no way responsible or connected with them, to prescribe the rules by which they confer degrees, is quite another matter. Nor do we regard them as being in fault in not recognizing the authority of the late convention in Louisville. Not more than about one-half of the colleges were represented in the convention. The Philadelphia, and New York, and New Orleans Colleges were among those that sent no delegates.

The convention adjourned to meet again on the day preceding the next annual meeting of the Association; and, by resolution, has requested that the several Medical Colleges of the United States appoint each a delegate. We suppose this one will be about the last of these conventions.

Medical education in the United States falls short of what it should be, because the material out of which physicians are made, is, as a general rule, crude. Most of the young men that present themselves to the colleges are without proper preliminary training. All of the colleges require three years' study on the part of the student, as a prerequisite to being a candidate for the degree. Now, how is this time usually *put in*? Do those who act as private preceptors lay out the work for the student, and examine daily the progress made? Very few physicians, who consent to serve as preceptors, pay the proper attention to the student. He is left mostly to his own notions. He studies, or not, as he thinks proper, and what he thinks proper. Such being the facts in regard to private pupilage, the wonder is, how, out of the material, the colleges make as good physicians as they do.

We allude to these circumstances as an off-set to the ignorant and

envious clamor kept up against the colleges, by certain individuals who seem to have invested their all in the desire to reform the age on the subject of Medical Education.

American Medical Association.

This body met with a very cordial reception from the profession and citizens of Louisville. Kentucky hospitality turned out to be all that has been said of it. Gentlemen from opposite points of the continent, although wearied with the fatigue of travel, expressed themselves as being amply remunerated by the enjoyments of the occasion, the meeting of brethren engaged in the same pursuit; the coming together in council of the young men of the nation, ardent in the profession; and of the old ones, not only ripe in years, but ripe in labors.

Many persons measure the value of these National reunions of medical men, by the size of the volume of transactions that follows. Judged by this rule, the meeting will not compare favorably with former ones. Many of the committees failed to report. This was true of standing, as well as special committees. Besides the committee on Prize Essays, received nothing that in its estimation, possessed merit enough for a prize, and consequently it awarded none.

The Association adjourned to meet next year, (in May,) at New Haven, Connecticut.

COLLEGE MUSEUM.—We are just now engaged in putting up in our College Museum our receipts from France and Germany. They embrace things pertaining to natural history and medicine. We have about thirty skeletons of vertebrata—fishes, reptiles, birds, and mammals. These have been so selected as to afford a representation of every prominent type.

The articles relating to human osteology are very fine. For example, we have the *Beauchene* preparations of the head, face, hands and feet, with blood-vessels and nerves; the internal ear, middle ear, the internal maxillary artery, etc.

The anatomical, surgical, and obstetrical departments have been

enriched by colored models in paste, (relief), and colored models in wax, (relief). These include—

Anatomy of the brain, the different parts removable, the hemispheres of the brain connected by *corpus callosum*.

Anatomy of the eye, thirteen models of its component parts.

The organ of hearing, the internal, middle, and external ear, four times the natural size—the parts movable.

Nine months' periods of pregnancy, fitting into one pelvis.

Illustrations of diseases of the skin.

Model of accouchment complete, etc., etc.

The department of chemistry has been enriched by many of the more useful forms of apparatus, and the Laboratory, with what has been on hand, may be said now to present every thing necessary to the full and thorough illustration of the department.

Stirling Medical College may, therefore, now be presented to its alumni and many warm friends with new claims for consideration. With as good a building as there is in the world for the purpose; with the Penitentiary, County Infirmary, and College Clinic for clinical material; with a Museum, now second to none in the character of its contents, who can help predicting a bright future for the Institution?

TO SUBSCRIBERS.—We send out bills with this, the last No. of the Eleventh Volume of the Journal. Those who are in arrears should need no other suggestion, but remit at once what they know to be the amount of their indebtedness. We find it an *up-hill* business to buy paper and pay for printing the Journal for hundreds of subscribers who from year to year neglect to pay anything. From the circumstance that such conduct is often more due to neglect than to dishonesty, we have made draughts from time to time on our patience. We are now, however, about out of that material, and unless delinquent subscribers respond to the bills now sent out, they will be cut off.

WATERY DISCHARGE FROM THE UTERUS DURING PREGNANCY.—Dr. Harvey made the following remarks on this affection at a meeting of the Cork Med. and Surg. Soc., Dec. 9, 1857: "In some books on Midwifery, watery discharge from the uterus is noticed as

amongst the diseases to which pregnant women are liable. A clear, limpid, colorless fluid, oozing in quantity from a few ounces to pints daily, flows away, sometimes stopping for a short time, and recommencing; and in the majority of the cases it continues nearly, or full to the time of delivery. The abdomen does not appear palpably reduced by these discharges, and a living child is commonly born at or near the full time. In the greater number of instances, also, there is evidence of the usual quantity of liquor amnii being present on the supervention of labor. Dr. Alexander's case, given in the third volume of the *Medical Commentaries*, shows this very prominently. In a case by Dr. Petel, also, in the *Gazette de Hôpitaux* of July, 1838, the liquor amnii is specially mentioned as normal in quantity.

“What is the source of this fluid, discharged as it is, to the amount of hundreds of pints in the course of a few months? The supposition of its coming from the cervical glands of the uterus, or from the vagina, both of which have been assumed as sources of it by different authorities, appeared altogether unlikely from the nature of the fluid, its quantity, and its mode of coming away in gushes of considerable quantity at a time. That it could come from the space between the decidua and chorion, or between the chorion and amnion, we have no pathological facts, so far as I am aware, to warrant our supposing such a source for the flow; whilst in the natural condition of parts such spaces do not exist; as, at a period of pregnancy before these discharges commonly show themselves (say the sixth month, or thereabouts), the cavity between the chorion and amnion has disappeared; and we know that the chorion and decidua are in contact throughout.

“Under these circumstances we seem driven to the conclusion that the amnion must be the source of this flow: that there may be occasional solution of continuity in this membrane, admitting of discharges from time to time, which either close again or admit by the mechanical relations of the bag to the neighboring parts of the amnion, refilling to a certain extent by a fresh secretion of its particular fluid. In confirmation of this view may be mentioned cases recorded by Dr. Denman, Professor Burns, of Glasgow, and Dr. Pentland, of Dublin, in which the amnion is said to have given way from fright or other sudden shock, the water being discharged without labor coming on. All these considerations tend rather to the view that the escaping fluid may be liquor amnii than to any other

which has been propounded. In the case which I am going to relate the symptoms were similar to those which were present in the cases of watery discharge which I have been noticing, and in this instance, as will be seen, the flow was undoubtedly amniotic.

“Mrs.——, mother of several children, was for more than a year, the subject of heavy sanguineous discharges, which were so little influenced by the treatment adopted that the existence of poly-pus was thought possible. An examination revealed considerable congestion of the os and cervix uteri, with superficial ulceration, which gave way to treatment generally and locally applied. During last summer her health was considerably improved, but occasionally menorrhagic attacks, which latterly observed more or less closely the monthly periods, showed themselves. Matters were going on thus when she suffered a considerable shock by her eldest boy meeting with a severe accident, in which his arm was fractured. On that day, for the first time (six weeks before delivery,) she had a sudden gush of clear watery fluid from the vagina, and since that time to the date of these notes (5th November,) she was scarcely free from it; it would diminish or nearly stop for a few days at a time, to come on again in gushes, and in considerable quantity. The quantity escaping in one of these was seldom less, and generally more, than half a pint; and on the late occasion, when the flow was accompanied by a heavy sanguineous discharge also, she thinks the combined amount was fully a quart. It came on in the horizontal position as well as in the erect, and apparently without any cause. The size of the abdomen did not appear much affected by these at any time.

“The occurrence of the watery discharge suggesting the probability of pregnancy, notwithstanding the menstrual changes which have been going on with some regularity, and that, if pregnancy did exist, the ovum might have suffered hydatid degeneration, I proposed an examination for the purpose of ascertaining the point. I found an abdominal tumor occupying the hypogastrium to above the umbilicus, and on laying my hands over its surface, it gave a good example of the value of a diagnostic indication lately suggested by Dr. Oldham; it afforded distinct evidence of its being uterine by gradually and regularly hardening under my hand. The movements of the child were also felt, and foetal pulsation, distinctly heard by the stethoscope, put an end to all doubts.

“I told the lady that she had passed some six or near seven months of her pregnancy without being aware of it, and that her

labor would probably come on prematurely, all of which she entirely disbelieved, and I could not induce her to make the necessary preparations. Two days after, I was called to her—the first stage of labor having set in with unusual distress and irritation; the pains peculiarly sharp and unbearable; the os uteri was hard and unyielding, and the breech, presenting in the second position, was felt in close contact. I immediately put her on antimonial solution, notwithstanding which the os uteri took over three hours to relax. After a first stage of about four and a half hours, and a second of less than half an hour, a male child of scarcely seven months' growth, was born. The presenting hip and buttock were perfectly black, evidently from the direct pressure to which they had been subjected, in consequence of the loss of the liquor amnii. None whatever escaped with the child, and the sanguineous discharge was also unusually scanty. I do not think I ever witnessed so dry a labor."—*Dublin Quart. Jour. Med. Sci.*, and *Amer. Jour. Med. Science*.

THE USES OF PAIN.—Mankind are so accustomed to shrink from pain, and so eager in seizing upon every means to lessen or annul it, that the facts of our having been endowed with it, as with a sense, by a beneficent Creator, and with the kindest intent, does not readily impress us. Yet that this is strictly true, daily observation teaches. Without pain to act as a sentinel, the body would almost momentarily be injured, perhaps hopelessly so, and Death would revel in such wise as that the race would soon be extinct. This is hardly an exaggerated statement; and a little reflection will enable any one to realize the immense amount of evil which would ensue to us all, were the "sense of pain" abolished.

A very interesting and instructive article, in a late number of the *Quarterly Review*, is transferred to the pages of the *Living Age* of the 24th of April, 1858. It is a *critique* upon "An Essay on the Beneficent Distribution of the Sense of Pain," written by Mr. G. A. Rowell, Honorary Member of the Ashmolean Society, and Assistant Underkeeper of the Ashmolean Museum. Most of the details are familiar to medical men, but any reader will be delighted with the pleasant style of the review, the entertaining illustrations and the facts communicated. It is a paper calculated to do good to the general reader in many ways; and not the least by the noble senti-

ments with which its last two or three pages teem. We allude to the remarks upon cruelty to animals. Many seem now to believe, as did Malebranche, that dogs, horses, and such like animals *do not feel*, and that, therefore, any amount of abuse, by means of kicks, blows, goading and spurring is admissible. We say many persons *seem* to suppose this, for although they hear a dog howl if kicked, and know that a horse springs forward under the spur, they do not realize, or do not think, how much unnecessary pain is inflicted by them, in their gusts of temper, upon animals almost always innocent of any fault.

To recur to our first topic—the wonderful guardianship over the bodily organs, so kindly established for us through the agency of pain. How few think of the subject in this light. Accustomed too much, to look upon pain as an unmitigated evil, we are apt to concentrate our hatred upon it, rather than to recognize its function; and we strive only to remove *it*, without seeking for its cause. The latter task is, it is true, mainly the province of the followers of the healing art; yet how much may others learn by properly considering their own sensations.

Pain is an evil, then, but it is also a blessing. It is composite in its essence; and in this it resembles many medicinal agents, which, whilst effecting a certain good, are exceedingly unpleasant in their action. Of course it would be foolish to term pain a good in itself, and therefore not seek to relieve and remove it. The future Sir Humphrey Davy doubtless changed his opinion very quickly and permanently, under the strong personal application of the argument implied in the story referred to by the *Quarterly Review*, in the opening paragraph of the article we have cited. “Sir Humphrey Davy, when a boy, with the defiant constancy of youth which had as yet suffered nothing, held the opinion that pain was no evil. He was refuted by a crab, who [which?] bit his toe when he was bathing, and made him roar loud enough to be heard half a mile off. If he had maintained, instead, that pain was a good, his doctrine would have been unimpeachable. Unless the whole constitution of the world were altered, our very existence depends upon our sensibility to suffering.” As the reviewer says, “without the warning voice of pain, * * * the crab might have eaten off the future Sir Humphrey’s foot while he was swimming, without his entertaining the slightest suspicion of the ravages which were going on.” So he adds, “had he survived the injuries from the crab,” he would have been destroyed by continuing the inhalation of carburetted

hydrogen, after it had almost caused his death, and yet saved him by inducing *painful* sensations.

The preservation of infancy is alluded to by the reviewer, as often entirely due to physical pain. Of course, in the absence of parents or nurses, thousands of children would perish from mere lack of that experience which suffering gives them by degrees.

Another phase in the "beneficent distribution of pain" is the undoubted total absence of it in what is termed the last struggle. Dissolution is painless; the agony has been distributed over other hours of existence; the sunset of life, like those of many a stormy natural day, are placid, most generally. The opinion, however, is still commonly entertained that there must be pain whilst the spirit is leaving the body, because of the occurrence of convulsive movements remarked at such times. The suffering is only apparent, not real. What a consolation to friends is this, and what a source of comfort to all poor mortals, who know that they must pass through the gate of death. Upon this point the reviewer says: "In fact, though disease is often painful, the act of dying is not. Bodily suffering would be no protection then, and, consistently with the invariable method of Providence, we are spared a useless anguish."

Anæsthetic agents, which have been so mercifully revealed to us, and whose discovery is certainly the greatest boon to humanity since that of vaccination, have been questioned in regard to one of their applications, by eminent medical men. We refer to their employment in obstetric cases. There are those who contend that the pains of labor, being, in fact, natural and healthy demonstrations, ought not to be interfered with; that they have an important part to play—and that they have such uses as ought not, even partially, to be lost to the parturient woman. Whilst many decry this view as foolish and unfounded, we confess to seeing much truth in it. There can be no dispute as to the benefit of ether and chloroform in surgical operations, or their application for the relief of any *pathological* condition; but childbirth is not a pathological state, but wholly a natural act. It may well be questioned how far we ought to interfere with what are termed its "pains." Of course, if the woman in labor begins to sink under their mere endurance, or any morbid element mingles with the process, our authority is at once established, to interpose—the state has become pathological. But often, anæsthetics are used in short and easy labors, when the patient would have done as well, or even better, without them. We can refer to

several instances in which labor has been undoubtedly retarded by the action of ether on the uterine efforts; and within a few days, a case has been mentioned to us by a highly intelligent and observing medical friend, where this was distinctly proved. The labor was a first one, and the birth was delayed a long time without any apparent reason. The suspension of the inhalation of ether was advised by the gentlemen referred to, and on complying with the suggestion the uterus *immediately* resumed its efforts, which safely and speedily resulted in the expulsion of the child.

The aspect of the use of pain deserves closer attention, and it may be well to sift obstetric cases more thoroughly; using anæsthesia, only, or chiefly, in such instances as really demand it.

We have already extended our remarks beyond the limits we had assigned to them. Pain, as an evil, has of late been placed more than could ever have been hoped for, under the dominion of scientific medicine. As a good, it still is vouchsafed to us in the shape of a watchful guardian; and it must be ever present on the earth in many forms and with every shade of intensity. It is only in the vision of the Revelation that we read, "and there shall be no more, death, neither sorrow, nor crying, *neither shall there be any more pain.*"—*Boston Med. and Surg. Jour.*

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[Jan. 1853.]

